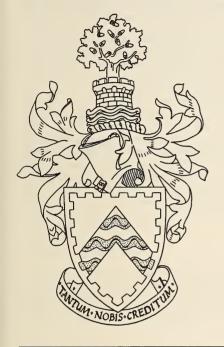


# Erindale College University of Toronto 1983-84



On January 8, 1975, the College of Arms granted to Erindale College its coat of arms in the following heraldic terms.

"Vert a Chevron barry wavy Argent and Azure a Bordure embattled Or And for the Crest On a Wreath Or and Vert Issuing from the battlements of a Tower proper rising from Water barry wavy Azure and Argent an Oak Tree fructed Or leaved proper, as the same are in the margin hereof more plainly depicted. And by the authority aforesaid We do further grant and assign the following Device or Badge that is to say a Roundel Vert thereon a Pile throughout Or overall a Fess wavy Azure charged with a like Barrulet Argent."

Green and gold, the colours of Erindale predominate in the coat of arms representing the natural beauty of the campus. The oak tree comes from the University of Toronto coat of arms with its motto, *Velut arbor aevo*, "May the tree thrive". The wavy blue and silver bars in the chevron signify the location of the College at a major bend in the Credit River and the motto, *Tantum Nobis Creditum*, "So much has been entrusted to us" is a word play on the name of the river.

Erindale College, one of the eight Colleges that constitute the Faculty of Arts and Science in the University of Toronto, opened in September 1967, as a suburban campus of the University of Toronto. The College offers the Arts and Science Programme of the University of Toronto and students may qualify for the University of Toronto Bachelor of Arts or Bachelor of Science degree in either a three or four year programme. A Bachelor of Commerce degree is also offered. The admission regulations are those of the University of Toronto.

Erindale College is located twenty miles west of downtown Toronto on Mississauga Road, in the City of Mississauga. (See the map inside the front cover for directions).

Anyone wishing information about the College should address: The Registrar, Erindale College, University of Toronto, Mississauga Road, Mississauga, Ontario, L5L 1C6.

The telephone number for information about full-time studies is 416-828-5399 and for part-time studies is 416-828-5344.

# **Important Notices**

 The Council of the Faculty of Arts and Science reserves the right to change the content of, or to withdraw, any course. In such cases every effort will be made to provide equivalent alternative

instruction, but this cannot be guaranteed.

2) The Faculty also reserves the right to limit the number of students in any course or any section of a course in circumstances where the number of qualified applicants exceeds the resources available. Notwithstanding this, every effort will be made to accommodate students, particularly in 100-series courses, although it is understood that some limitation on the availability of certain sections will have to be made.

3) The University reserves the right to alter the fees and other charges described in the Calendar.

4) This calendar provides information for Erindale campus only. Two other Arts and Science calendars are published by the University of Toronto, one for the St. George campus and the other for the Scarborough campus.

5) The words "man" and "he" are used in the generic sense throughout this Calendar.

6) ACADEMIC OFFENCES ARE A SERIOUS MATTER. See page 40.

7) The University holds the student responsible for knowing the rules and regulations printed in the calendar.

8) Receipt of registration material or any college publication, submission of a registration form or payment of fees does not necessarily constitute eligibility to register in the coming session. Students who are suspended as a result of the May or August examinations will be so informed on the Statement of Results and will not be permitted to register. Any fees paid toward the session will be refunded in full.

# **Using This Calendar**

The Erindale calendar serves as a counselling guide and statement of the most important rules and regulations for students seeking to obtain the degree of Bachelor of Arts, Bachelor of Science or Bachelor of Commerce from the University of Toronto through Erindale College.

Each department offering courses at Erindale has included a list of its academic staff, an introductory essay, and the programmes which it sponsors. When selecting courses, the student should read these essays, as well as the descriptions of courses offered, and seek advice from academic counsellors when necessary. Particular attention should be paid to exclusions, prerequisites and corequisites. Students who wish to have such requirements waived, or who have equivalent qualifications, must consult the department offering the course.

It is the students' responsibility to make sure that they observe the rules and regulations of the Faculty, important dates, etc.. All students should refer to the list of *Sessional Dates* so as to avoid incurring academic or financial penalties and are urged to read the sections entitled *Academic Status* and *Degree Requirements* as these state concisely what is required in order to qualify for the degree.

All students upon successful completion of four full credits are required to choose a programme in a discipline or "approved area of study". Details of specialist and major and minor programmes are to be found in Section 7 *Courses and Programmes*. Note especially two programmes unique to Erindale, Art and Art History and Survey Science.

The courses are described in Section 8 and many departments have more detailed brochures to help you in your choice. The index at the back of this calendar and the explanation of symbols and course codes should be consulted frequently. The Registrars and the staff of the Registrar's Office are the experts on rules, regulations, degree requirements and everything that affects the student's academic life. When in doubt, ask your Registrar.

# **Related Publications**

# **Timetable and Registration Information**

These supplements to the Calendar are issued in June and again in September in time for the Winter Session registration week. They contain specific instructions for registration and enrolment, and detailed timetable and scheduling information for the winter session. The information they contain is just as important as that in this Calendar.

### Schedule of Fees

This publication which contains information on academic and incidental fees, payment procedures and refunds, is sent to each student before registration.

### Summer Session 1983

This contains details of courses offered in the Summer Session and is available in March.

# The Erindale College Awards Bulletin

This provides information on Government financial assistance, scholarships, medals, prizes and bursaries. A copy may be obtained from the Awards and Financial Aid Office, Room 211, North Building; the Registrar's Office, Room 2122 South Building; and the Part-time Studies Office, Room 216 North Building

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# **Academic Year**

The academic year is divided into a Summer and a Winter Session, and each session is divided into two terms. The dates for the Sessions and their terms are:

### Summer Session 1983

First Term: Monday, May 16, 1983 - Thursday, June 30, 1983 Second Term: Monday, July 4, 1983 - Friday, August 19, 1983

# Winter Session 1983-84

First Term: Monday, September 12, 1983 - Friday, December 23, 1983 Second Term: Monday, January 2, 1984 - Friday, May 11, 1984

# **Sessional Dates**

Applicable Session	Date 1983	Event
S	March 31	Last date for new students to apply for admission in order to take in A, F, H, and Y courses which begin in May of the Summer Session
W	April 1	Good Friday - University closed
Š	April 4	Registration for Summer Session and enrolment in
	April 4	Summer courses begin
S	May 13	Last date for <i>registration</i> in A, F, H, and Y courses in the Summer Session; after this date a late registration fee will be imposed
S	May 13	Last date for new students to apply for admission in order to enrol in B and S courses which begin in July of the Summer Session
S	May 16	First term begins. Classes begin in A, F, H and Y courses
S	May 20	Last date to add A, F, H and Y courses
S	May 23	Victoria Day - University closed
S,W	May 24-25	English Proficiency Tests
S	June 10	Last date to <i>drop</i> A and F courses without academic penalty
W	June 16	Spring Convocation for Erindale College
S	June 24	First term ends
		Classes end in A and F courses; all term work to be submitted by this date
S	June 27-30	Final examinations may be held in A and F courses Classes in H and Y courses continue to meet
W	June 30	Last date for new students to apply for admission
W	June 30	Last date to submit request for College transfer for full-time studies in the Winter Session - 1983-84
S	June 30	Last date for registration in B and S courses. After this date a late registration fee will be imposed
S	July 1	Dominion Day: University closed
S	July 4	Second term begins. Classes begin in B and S courses
S	July 8	Last date to add in B and S courses
S	July 22	Last date to <i>drop</i> H and Y courses without academic penalty
S	July 29	Last date to <i>drop</i> B and S courses without academic penalty
W	August 1	Students are urged to apply by this date for transfer from part-time to full-time studies
S	August 3	Civic Holiday - University closed
S	August 12	Classes end in B, H, S and Y courses; all term work to be submitted by this date
S	August 15-19	Final Examinations in B, H, S and Y courses Last date for submission of petitions for aegrotat consideration.
W	September 5	Labour Day - University Closed
W	September 6-9	Registration week
S	September 9	Statements of Results mailed beginning today
W	September 9	Last date for <i>registration</i> in the Winter Session;
		after this date, a late registration fee will be imposed
W	September 12	First term begins. Classes begin in A, F, H and Y courses

# **Sessional Dates**

Applicable Session	Date 1983	Event
S,W	September 13-16	English Proficiency Tests. See Timetable and Registration Information for details
W	September 23	Last date to add A, F, H and Y courses
Š	September 23	Last date for students who expect to graduate at
5	September 23	the Fall Convocation to notify their College Regis- trar
W	October 10	Thanksgiving Day - University closed
W	October 11	Meeting of the Erindale College Council
W	November 4	Last date to <i>drop</i> A and F courses without academic penalty
W	November 15	New students must apply for admission before this date in order to enrol in B and S courses beginning in Janurary 1984
W	November 21	Meeting of the Erindale College Council
W	November 23-25	Fall Convocations for the Faculty of Arts and Science
W	December 9	Classes end. All term work in A and F courses to be submitted by this date
W	Dec. 12-23	Final Examinations for A and F courses Term tests for multi-sectioned H and Y courses may be held. Last date for submission of petitions for aegrotat
W	December 15	consideration.  Last date for students in Study Elsewhere Programme to confirm their programmes
	1984	
W	January 2	Second term begins. Classes begin in B and S courses and resume in H and Y courses Nominations open for Erindale College Council
W	January 13	Last date to add B and S courses
W	January 15	Second installment of fees due
S,W	January 24-25	English Proficiency Tests
W	January 25	Meeting of the Erindale College Council
W	February 4	Nominations close for Erindale College Council
w	February 10	Last date to <i>drop</i> H and Y courses without academic penalty
W	February 15	Last date to apply for the Study Elsewhere Programme
W	February 13-17	Reading week
W	February 17	Last date for students who expect to graduate at the Spring Convocation to notify their College Registrar
W	February 24	Last date to <i>drop</i> B and S courses without academic penalty
W	March 19	Meeting of the Council of the Faculty
W	March 22	Meeting of Erindale College Council
S	March 31	Last date for new students to apply for admission in order to enrol in A, F, H and Y courses which begin in May of the Summer Session
W	April 6	Classes end; all work in B, H, S and Y courses to be submitted by this date
W	April 9-13	Study Week; no tests or examinations may be held in this period

1984

# **Sessional Dates**

Applicable Session	Date 1984	Event
W	April 16-May 11	Final examinations for B, H, S and Y courses
W	April 20	Good Friday; University cloded
W	May 11	Last date for submission of petitions for aegrotat consideration
S	May 14	First term begins. Classes begin in A, F, H and Y courses
S,W	May 23-24	English Proficiency Tests
W	June 5	Statements of Results for Graduating students mailed beginning today
W	June 18	First Convocation for the Faculty of Arts and Science
W	June 19	Statements of Results for students who are not graduating mailed beginning today
S	June 22	Classes end in A and F courses; all term work to be submitted by this date. Classes in H and Y courses continue to meet
W	June 30	Last date for receipt of applications for College transfer for full-time studies in the Winter Session
W	June 30	Last date for new students to apply for admission in order to take A, F, H and Y courses which begin in September.
S	July 3	Second term begins. Classes begin in B and S courses
S	August 10	Classes end in B, H, S and Y courses; all term work to be submitted by this date
S	August 13-17	Final examinations in B, H, S and Y courses
Š	September 7	Statements of Results mailed beginning today

Note: Course suffixes in this section refer to those which appear in the Calendar Supplement.

### Administrative Staff

# Officers of the University of Toronto - 1982-83

Chancellor G. Ignatieff, CC, MA, LLD, DCL, DLittS President J.M. Ham, OC, BASc, SM, ScD (to June 30, 1983) President D.F. Forster, BA, AM (from September 1, 1983) Chairman of the Governing Council J.A. Whitten, BASc, PEng Vice-President and Provost D.W. Strangway, MA, PhD, FRSC Vice-Provost E. Kingstone, BSc, MD, CM, FRCP(C), FAPA Vice-Provost W.G. Saywell, MA, PhD R.N. Wolff, BSc. MBA, DBA Vice-Provost Vice-President, Research and Planning and Registrar D.M. Nowlan, BSc, MA, PhD Vice-President, Business Affairs A.C. Pathy, BASc Vice-President. Personnel and Student Affairs W.E. Alexander, BSP, MSc, PhD Vice-President. Institutional Relations D.G. Ivev, MA, PhD University Ombudsman E. Hoffman, BA Chief Librarian M.J. Sharrow, BS, MALS Secretary of the Governing Council J.G. Dimond, MA, PhD Director of Admissions W. Kent, MA Director of Student Awards P.S. Phillips, BA, CA Director of Student Record Services M.S. Lippard, MA Warden of Hart House R.M.H. Alway, MA, PhilM Director of Student Services E.A. McKee, MA Acting Director of Advisory Bureau D. Graham, MA, PhD Director of Athletics and Recreation G.W. Chapman, BSc (PE) MSc Director of Career Counselling and Placement Centre R. Frankle, BA Director of University Health Service G.E. Wodehouse, MC, MD, FRCP(C), MRCP Director of Housing Services S. Mason, BADirector of International

# Officers of the Faculty of Arts and Science - 1982-83

Dean Vice-Dean Vice Dean Vice Dean Vice Dean Vice Dean Assistant Dean and Secretary Assistant Secretary Executive Assistant Director of Student Affairs Director of Academic Records Coordinator - Administrative Systems Coordinator - Academic Systems R.L. Armstrong, MA, PhD, FRSC I.M. Drummond, MA, PhD R.H. Farquharson, MA, PhD W.D. Foulds, BA C.R.C. Dobell, BA J.M. Mills, BA J.M. Mills, BA G.E. Altmeyer, MA, MLS C.A. Belford, BTh A.M. Lewis, BA

Coordinator - Student Records J. Gilliland, BA

Student Centre E. Paterson, BA

# Officers of Erindale College - 1982-83

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Vice-Principal (Academic) R.W. Van Fossen, AM, PhD
Vice-Principal

(Administration) L.J. Brooks, BCom, MBA, FCA
Campus Relations Director T. Reid, BSc

Associate Dean (Humanities &

Part-Time Studies) R.W. Van Fossen, AM, PhD

Associate Dean (Social Sciences) L.J. Brooks, BCom, MBA, FCA Associate Dean

(Sciences) J.J. Fawcett, BSc, PhD

College Librarian H.L. Smith, BA, BLS

Registrar M.H. Cooper, BA

Director, Part-time Studies &
Continuing Education L.T. McCormick, BA, AM, PhD
Athletics & Recreation

Director R.M. Ryckman, BA, MEd, PhD
Assistant Director B. Grochowski, BPHE, BEd

Manager, Business Services R.S. Rawlings, BA

Coordinator,
Career Counselling
and Placement Centre E. Paley, BA

and Placement Centre E. Paley, BA

Health Service

Coordinator V.I. Degutis, RegN
Physicians E.G. Davies, BSc, PhmB, MD, CCFP(C)
R.P. Davis, MB, ChB, DObstet, RCOG, CCFP(C)

Psychiatrist C.M. Rideout, BSc, MD, FRCP(C)

Manager, Physical Plant Services A. Opalinski, BSc, PEng

Resident Artist N. Hazelgrove

Student Aid Officer L. Webber

Director, Student Housing M.J. Lavelle, MA

Coordinator, Technical Services A.W. Boorman

Director,
Teaching | Learning Centre M. Northey, MA, PhD

# **Erindale College Faculty**

(As of 1982-83)

\*Denotes Discipline Representative

# **Division of Humanities**

### Classics

R.L. Beck, BA (Oxford), MA, PhD (Illinois)

\*T.G. Elliott, BA (Toronto), PhD (Harvard)

C.I. Rubincam, BA (Toronto), BA (Oxford), PhD (Harvard)

# **English**

T.H. Adamowski, BA (Delaware), MA, PhD (Indiana)

G. Allen, BA (Cornell), MA (Chicago), PhD (Toronto)

J.H. Astington, BA (Leeds), MA (McMaster), PhD (Toronto)

B. Corman, AB, AM, PhD (Chicago)

A. Craniford, BA, MA, BEd, PhD (Toronto)

V.A. DeLuca, BA (Hamilton Coll), MA, PhD (Yale)

J. Dutka, BA, MA (Alberta), ARCT (RCM, Toronto), PhD (Toronto)

D. Hill, AB (Kenyon Coll), MA, PhD (Columbia)

\*I. Lancashire, BA (Manitoba), MA, PhD (Toronto)

D. Latham, BA (Acadia), MA (Toronto), PhD (York)

M.J. Levene, BA (Manitoba), MA, PhD (Toronto)

M.M. Lynch, BA (Goddard Coll), PhD (Iowa)

R.R. McLeod, AB (Harvard), MA, PhD (Toronto)

L.M. Miller, BA, MA, PhD (Toronto)

M. Northey, BA (Toronto), MA, PhD (York)

J. Skvorecky, PhD (Charles)

R. Sullivan, BA (McGill), MA (Connecticut), PhD (Sussex)

R.W. Van Fossen, AB, AM (Duke), PhD (Harvard)

# Fine Art

L. Eleen, BA, MA, PhD (Toronto)

T. Martone, BA, MA (Boston), MA (Inst Fine Art, NY) PhD (NYU)

\*B. Welsh, BA, MPhil, (Toronto), PhD (Utrecht)

# Sheridan College, Fine Art Studio Faculty

J. Armstrong, BFA (Mt Allison), MA (Chelsea Sch. of Art, London) PhD (Courtauld Inst.)

E. Brittan, Dip AD (Hornsey College of Art London), ATC (London)

J. Crossan, Dip Ind Des (Ontario College of Art)

P. Hogan, Dip Graphic Design (Sheridan College)

Z. Markan, BFA (Nova Scotia College of Art & Design)

A. Neumann, Dip (Montreal Mus of Fine Art)

J. Plow, Dip Photo Arts (Rverson)

C. Schiffleger Bobb, BSc, MSc (Wisconsin) RCA

R. Sewell, BA (Missouri)

H. Simkins, BA (York)

A. Smith, BA (Wellesley), MA (Mills), MFA (California), PhD (Toronto)

D. Wightman, Dip Ind Design (Ontario College of Art)

B. Zack, BA (Concordia), MFA (Rutgers), RCA

### French

C. Cloutier-Wojciechowska, LèsL (Laval), Ddel'U (Paris)

M-P. Ducretet, LPhL, AgrEMS (Lovanium), DPhL (Louvain)

C. Elkabas, BA (York), MA (Illinois)

J. Féral, LèsL (Paris), MA (Ottawa), D IIIe C (Paris)

J. Le Gall, BA (Alberta), MA (Toronto)

J. Paterson, BA, MA, PhD (Toronto)

\*N.J. Swallow, BA, MA, PhilM (Toronto)

A. Thomas, BA (York), MA, PhD (Toronto) D.A. Trott, BA (UBC), MA, PhD (Toronto)

H.H. Weinberg, BA (Roosevelt), MA (Northwestern), PhD (Michigan)

### German

J. Bielert, BA (Queen's), MA, PhD (Toronto)

D.B. Little, BA (Western), MA, PhD (Wisconsin)

\*C. Saas, BA (Wisconsin), MA, PhD (Indiana)

### History

D. Andrew, BA (NYU), MSc, (LSE, London), PhD (Toronto)

S. Aster, BA, MA (McGill), PhD (LSE, London)

G. Chada, BA (Lakehead), MA, MPhil (Waterloo), PhD (Toronto)

M. Dafoe, BA (Manitoba), MA (Queen's)

J.W. Goering, BA (Kansas), MAR (Yale), MA, MSL, PhD (Toronto)

R.E. Johnson, BA (Antioch), PhD (Cornell)

C. La Vigna, BA (Skidmore), PhD (Rochester)

D.P. Morton, BA (RMC), BA, MA (Oxford), PhD (London)

\*R.W. Pruessen, BA (CUNY), MA, PhD (Pennsylvania)

D.L. Raby, BA (Cambridge), PhD (Warwick)

E. Sager, BA, MA, PhD (UBC)

R. Stein, BA (UBC), MA (Sussex), PhD (York)

W.B. White, AB (Missouri), MS, PhD (Wisconsin)

### Italian

G. Katz, BA (London), MA, PhD (Toronto)

R. Longo Lavorato, BA, MA (Toronto)

M. Lettieri, BA, MA (Toronto)

L.T. McCormick, BA (Toronto), AM, PhD (Rutgers)

\*G. Pugliese, BA, MA, PhD (Toronto)

# Linguistics

E. Cowper, BA (McGill) AM, PhD (Brown)

K. Rice, BA (Cornell), MA, PhD (Toronto)

# Philosophy

J. Brunning, BA (Madonna), MA (Detroit) MA, PhD (Toronto)

J.V. Canfield, BA (G. Washington), MA, PhD (Brown)

C.E. Cassin, BA, MA (Oxford), MA, PhD (Florida)

R.B. de Sousa, BA (Oxford) Literae Humaniores, PhD (Princeton)

D.D. Evans, BA, (Toronto), BD (McGill), BPhil DPhil (Oxford)

R.Z. Friedman, MA, PhD (Toronto)

W.J. Huggett, BA, MA, PhD (Toronto)

G. Hunter, BA (Bishops), MA, PhD (Toronto)

B.D. Katz, BA (Manitoba), MA, PhD (Cornell)

\*E. Kremer, AB (St. Louis), PhD (Yale)

W. Seager, BA, MA (Alberta), PhD (Toronto)

# **Religious Studies**

L.J. Elmer, BA, STB (Toronto), STD (St Thom Aquinas)

J.T. Gollnick, BA (Marquette), MA, PhD (Toronto)

M.W. Higgins, BA (St FX), BEd (Toronto), MA, PhD (York)

M.J. Lavelle, BA (Windsor), MA (Marquette)

\*S.A. Nigosian, BA (Toronto) MA, PhD (McMaster)

A. Reinhartz, BA (Toronto), MA (McMaster)

L.E. Schmidt, BA, MA, PhD (Toronto)

C-S. Yu, BA (Kookmin), BD (Hankook), MA (Hartford), MA, PhD (McMaster)

# Slavic Languages and

# Literature

\*K.A. Lantz, BA (Alberta), MA, PhD (Toronto)

### Spanish

M. Cohen, DocFilRom (Madrid)

\*O. Hegyi, PhD (Toronto)

E.G. Neglia, BA (Roosevelt), MA (Illinois), PhD (Washington Univ.)

# **Division of Sciences**

Life Sciences

**Botany** 

J.B. Anderson, BA (Rhode Island), PhD (Vermont)

P.W. Ball, BSc (London), PhD (Leicester)

W.R. Cummins, BSc (McMaster), PhD (Michigan State) \*W.G. Filion, BA (Queen's), MSc (Guelph), PhD (UWO)

P.A. Horgen, BA (N Iowa), MSc (Iowa), PhD (SUNY)

R.T. Irvin, BSc, PhD (Calgary)

P.F. Maycock, BA (Queen's), MSc, PhD (Wisconsin)

J. Svoboda, BSc (UWO), PhD (Alberta)

G.R. Thaler, MSc (McMaster), PhD (Toronto)

**Psychology** 

R. Abramovitch, BA (McGill), MA, PhD (Minnesota) T.M. Alloway, BA (Knox), MA, PhD (Northwestern)

K. Blankstein, BA (McMaster), MA, PhD (Waterloo)

\*C.M. Corter, BA (Davidson), PhD (UNC)

F.I.M. Craik, BSc (Edinburgh), PhD (Liverpool)

A.S. Fleming, BSc (Columbia), PhD (Rutgers)

M. Green, BSc (Pittsburgh), PhD (Northeastern)

L. Krames, BA, MA, PhD (Temple)

M. Moscovitch, BSc (McGill), MA, PhD (Penn)

S. Paunonen, BA, MA (Western)

P. Pliner, BS (Purdue), PhD (Columbia)

J. Polivy, BS (Tufts), MA, PhD (Northwestern)

J.V. Roberts, BSc, MA (Toronto)

B. Schneider, BA (Michigan), PhD (Harvard)

S.E. Trehub, BCom, MA, PhD (McGill)

Zoology

T.M. Alloway, BA (Knox), MA, PhD (Northwestern)

R.L. Baker, BSc (Guelph), MSc, PhD (Alberta)

N.C. Collins, BA (Pomona), PhD (Georgia)

J.H. Fullard, BSc, (Toronto), MSc, PhD (Carleton)

D.L. Gibo, BA (San Fern Vall State Coll), PhD (California)

A. Guha, MSc, PhD (Calcutta)

G.K. Morris, BSA (Guelph), MSc, PhD (Cornell)

D. O'Day, BSc, MSc (UBC), PhD (Delaware)

P.J. Pointing, BScF, PhD (Toronto)

R.R. Reisz, BSc, MSc, PhD (McGill)

B.I. Roots, BSc, PhD (London)

\*W.G. Sprules, BSc (Queen's), MA, PhD (Princeton)

F.M. Szeicz, BSc, PhD (London)

Physical Sciences

Professors Emeriti

(Physics, Earth & Planetary Science)

J.T. Wilson, CC, OBE, BA (Toronto), MA (Cambridge), PhD (Princeton), ScD (Cambridge), DSc, DUniv, LLD, FRSC, FRS

(Survey Science)

L.A. Gale, BA (Queen's), DTS

Astronomy

N.R. Evans, BSc (Wellesley), MSc, PhD (Toronto)

\*J.B. Lester, BA (Northwestern), MSc, PhD (Chicago)

J.R. Percy, BSc, MA, PhD (Toronto)

Chemistry

S.B. Abhyankar, BSc, MSc (Bombay) MS, PhD (Florida State)

R. Aroca, PhD (Moscow)

J.M. Deckers, LSc, DrSc (Louvain)

M. Moskovits, BSc, PhD (Toronto)

A.J. Poë, BA, BSc, MA (Oxford), PhD, DSc, DIC (London), MIA (Cambridge)

J.C. Poë, ARCS, MSc, DIC (London)

J.K. Reed, BA (Queen's), MSc (UWO), PhD (Wisconsin)

\*E.A. Robinson, BSc, PhD, DSc (London)

I.W.J. Still, BSc, PhD (Glasgow)

M.A. Winnik, BA (Yale), PhD (Columbia)

# Computer Science

\*A. Fournier, BS (Insa-Lyon), MSc (Montreal), PhD (Texas)

G.S. Graham, BSc, MSc (Toronto), MA (Princeton), PhD (Purdue)

A.D. Jepson, BSc (UBC), PhD (Caltech)

E. Kaltofen, MS (Rensselaer Polytech Inst)

C. Rackoff, BSc, MSc, PhD (MIT)

# Earth and Planetary Science

(Geology & Geophysics)

I.H. Campbell, BSc (W Australia), DIC (Imperial Coll), PhD (London)

J. Currie, BA (McMaster), MA, PhD (Toronto)

J.J. Fawcett, BSc, PhD (Manchester)

H.C. Halls, BSc (Sheffield), MD (Durham), PhD (Toronto)

D.R. Kobluk, BSc, MSc (McGill), PhD (McMaster)

\*G.W. Pearce, BSc, MSc (Memorial), PhD (Toronto)

P.-Y. F. Robin, MSc (Toronto), PhD (MIT)

R.M. Stesky, BSc, MSc (Toronto), PhD (MIT)

# **Mathematics**

J. Alexander, BSc, MSc (Kerala) MA(York)

T. Bloom, BSc (McGill), MA, PhD (Princeton)

B. Dekster, MSc (USSR), PhD (Leningrad)

P.H.H. Fantham, MA, DPhil (Oxford)

D. Geddes, BA (Toronto)

\*I.R. Graham, BSc (Toronto), PhD (Princeton)

V. Jurdjevic, BS (Penn State), MS, PhD (Case Western Reserve)

I. Knowles, BSc (Adelaide), MSc, PhD (Flinders)

J.E. LeBel, BSc (McGill), MA, PhD (Toronto)

R.A. Mathon, Dipl Ing (Prague), MSc, PhD (Toronto)

D. Singman, BSc, MSc, PhD (McGill)

F.D. Tall, AB (Harvard), PhD (Wisconsin)

S. Tanny, BSc (McGill), PhD (MIT)

W.A.R. Weiss, BSc (Saskatchewan), MSc, PhD (Toronto)

N. Yui, BS (Tsuda College), PhD (Rutgers)

# **Physics**

R.F. Code, BSc (Toronto), AM, PhD (Harvard)

D.J. Dunlop, MA, PhD (Toronto)

\*R.M. Farquhar, BA, MA, PhD (Toronto) FRSC

R.K. Logan, BSc, PhD (MIT)

J.E. Sipe, ScB (Brown), MA (Waterloo), PhD (Toronto)

H.W. Taylor, BSc, MSc, PhD (Manitoba)

H.M. Van Driel, BSc, MSc, PhD (Toronto)

S.S.M. Wong, BA (Int'l Christian Univ, Tokyo), MS (Purdue), PhD (Rochester)

# **Statistics**

K.W. Ng, BSc (Ch U of Hong Kong), MSc (Alberta), PhD (Toronto)

\*H. Niederhausen, Dipl Maths (Karlsruhe), PhD (Graz)

# **Survey Science**

G. Gracie, BASc (Toronto), PhD (Illinois), PEng

\*R.C. Gunn, BASc, MASc (Toronto), MSc (Ohio State), PEng, OLS

D.C. Kapoor, R. Adm, IN (Retd), BSc (Lawrence College, India)

D.W. Lambden, BScF (NB), Dip TCP(Sidney), FRICS, FIS (Aust), MNZIS, CLS, OLS

G.K. Sherurah, BScEng (East Africa), DPhil (Oxford), CLS (East Africa)

P. Vanicek, Dipl Ing, PhD (Prague), PEng

J.K. Young, BEng, MEng(TUNS), PEng, CLS, OLS,

# Adjunct Professors

R.E. Clipsham, BSc (Guelph), PEng, OLS

J.D. Crane, QC, BA (Manitoba), LLB (Osgoode)

I. de Rijcke, BSc (Toronto), LLB (Windsor), OLS

G.R. Douglas, BSc (Dalhousie), CLS

T.C. Seawright, BA (WLU), OLS

# **Division of Social Sciences**

# Anthropology

G. Crawford, BA (Toronto), MA, PhD (N Carolina)

J. Davies, BA, MA, PhD (Toronto)

D. Farslow, BA (Windsor), MA (Ohio State)

W. Finlayson, BA, MA, PhD (Toronto)

C. Holzberg, BA (McGill), MA (Iowa), PhD (Boston)

B.L. Kettel, BA (Toronto), PhD (Illinois)

F.J. Melbye, BA (Washington), MA (SUNY), PhD (Toronto)

A. Mohr, AB (California), PhD (Wisconsin)

\*L.R. Reinhardt, BFA (Maryland Inst of Art), MA (Indiana), PhD (S Illinois)

B.A. Sigmon, BA (N Carolina), MA, PhD (Wisconsin)

R.M. Vanderburgh, BA (Radcliffe), MA (Northwestern)

### Commerce

V. Aivazian, BS (MIT), MA, PhD (Ohio State)

L.J. Brooks, BCom, MBA (Toronto), FCA

M.J. Bryant, BCom (Canterbury), MCom (Auckland), MA (Ohio State), ACA(NZ)

M.G. Evans, BSc, MSc Technology (Manchester), MIA, PhD (Yale)

G.H. Haines, SB (MIT), MS, PhD (Carnegie IT)

J. Ham, BA (Toronto), MBA (Columbia) CPA, CA

V.M. Hanton, BCom (Memorial), MBA (Dalhousie), CGA

\*C.E. La Hay, BA (Western) MBA (Toronto), CA

D. Losell, BA, MBA (Toronto), CA

# **Economics**

A. Dow, MA (Simon Fraser), PhD (Manitoba)

S. Dow, MA (Manitoba), PhD (Glasgow)

S.M. Eddie, BSc (Minnesota), PhD (MIT)

J.E. Floyd, BCom (Saskatchewan), MA, PhD (Chicago)

M.A. Fuss, BSc, MA (Toronto), PhD (Calif)

S. Gupta, BA (Gujarat), MA, PhD (McMaster)

\*M.J. Hare, BCom (Toronto)

J.A. Hynes, AB (Johns Hopkins)

A. McLennan, BA (Chicago)

G. Newman, BA, MA (SFU), PhD (SFU)

J.E. Pesando, BA (Harvard), MA (Calif), PhD (Toronto)

D. Pokorny, MA (Charles), PhD (Czech Academy of Sciences)

S.A. Rea, AB, PhD (Harvard)

F. Reid, BA (UBC), MSc (LSE, London), PhD (Queen's)

M. Sansom, BS, MSc (McGill) MA (Western)

G. Slazor, BA (Carleton)

R. Ware, BA, MA (Cambridge), PhD (Queen's)

M. Wooders, BA (Edmonton), PhD (Minnesota)

Geography

H.F. Andrews, BA, MSc (London), DPhil (Sussex)

G.H.K. Gad, Dr Phil (Nurnberg), PhD (Toronto)

C.J. Houston, BA, MA, PhD (Toronto)

A.G. Lewkowicz, BSc (Southampton), MA, PhD (Ottawa)

S.H. Luk, BA, MPhil. (Hong Kong), PhD (Alberta)

T.F. McIlwraith, BA, MA (Toronto), PhD (Wisconsin)

\*D.S. Munro, BSc, MSc (McGill), PhD (McMaster)

R. Pushchak, BA (Toronto), MES (York), MA (Princeton)

R.R. White, BA (Oxford), MSc (Penn State), PhD (Bristol)

### **Political Science**

J. Barros, AB, MIA, PhD (Columbia)

A. Braun, BA, MA (Toronto), PhD (LSE, London)

M. Chandler, BA (CCNY), PhD (N Carolina)

D.B. Cook, BA, MA, PhD (Toronto)

\*R.B. Day, BA, MA, Dip REES (Toronto), PhD (London)

J. De Marco, BA (Toronto), MPhil (York), MPhil (McGill)

P.W. Fox, BA, MA (Toronto), PhD (LSE, London)

J.P. Masciulli, BA, MA PhD (Toronto)

D.M. Rayside, BA (Carleton), AM, PhD (Michigan)

P. Solomon, BA (Harvard), MA, PhD (Columbia)

D.A. Wolfe, BA, MA (Carleton), PhD (Toronto)

# Sociology

H. Boughey, BA (Columbia), MA, PhD (Princeton)

D.F. Campbell, BA (St Francis Xavier), MA, PhD (C U of America)

P.J. Carrington, AB (Harvard), MA, PhD (Toronto)

L.B. Deutschmann, BA, MA, PhD (Toronto)

H. Friedmann, AB (U Mich), MA, PhD (Harvard)

A.R. Gillis, BA, MA (Dalhousie), PhD (Alberta)

B.S. Green, BA (Brandeis), PhD (York)

\*W.E. Kalbach, BA, MA, PhD (Washington)

J.B. Kervin, BA (UBC), PhD (Johns Hopkins)

C.S. Milner, BA, MA (Wisconsin), PhD (Toronto)

E. Silva, BA (SUNY), MA, PhD (Michigan)

J.H. Simpson, BA (Seattle Pac Coll), BD, ThM (Princeton Th Sem), PhD (Stanford)

M.W. Spencer, AB, MA, PhD (California)

A.L. Stein, BA, MA (Cal Berkely), PhD (Cal Santa Barbara)

### Librarians

Assistant to the College Librarian Reference Librarians

M. Friend, BA, MA, BLS, MLS

M. Currie, BA, MLS

E. Goettler, BA, MLS

D. Lowe, BA, MLS

S. McCaskill, BA, BLS, MLS

# **Erindale College Council**

The Erindale College Council develops academic policy, awards scholarships, bursaries, prizes and other awards in the gift of the College and advises the Principal on all matters concerning the conduct of College affairs. It is composed of the chief academic administrators of the College, all members of the teaching staff, 60 full-time undergraduates, 15 part-time undergraduates, 5 graduate students, the Heads of administrative departments, 5 members of the administrative staff, 2 members of the Erindale alumni and 2 members of the Associates of Erindale.

The Council appoints three standing committees, the Executive Committee, Academic Affairs Committee and College Affairs Committee. Each of these may appoint such sub-committees as are deemed necessary to carry on the policy and decision making of the College. Like the Council itself, the composition of all committees reflects the various interests and concerns of all College members. The dates of the meetings of the Erindale College Council are listed in the Sessional Dates in this Calendar.

# Principal's Message

I am pleased to welcome you to Erindale College. In 1983-84 Erindale will celebrate its seventeenth birthday. Since the University of Toronto is more than one hundred and fifty years old, Erindale is one of the youngest colleges in one of the oldest universities in Canada.

This combination of youth and age affords us some unique advantages. We can benefit from the freshness and enthusiasm of youth but at the same time we can enjoy the accumulated wisdom and rich experiences of a well-established and very distinguished university. Since Erindale students are members of the University of Toronto, they may study on both campuses and use the resources in both places.

During the past 16 years, Erindale has grown rapidly. We now have approximately 3,700 full-time and 1,400 part-time undergraduates, about 200 faculty, several hundred post-graduate students and teaching assistants, and 225 support and administrative staff.

The College has a fine library which contains 227,000 volumes and offers comfortable accommodation and professional assistance for readers. Erindale's South Building has excellent laboratories, lecture halls, seminar rooms, a bookstore, meeting place, gymnasium, art gallery, medical facilities, professorial offices, and a large cafeteria. The North Building also has classrooms, lounges, academic offices, and a cafeteria.

Recently we increased the residential accommodation on the campus. We now have comfortable modern facilities for 425 students who live in fully furnished, self-contained townhouses suitable for four to six persons

Students have an active elected government called the Erindale College Students' Union. ECSU sponsors a number of clubs and events devoted to various interests. There is a student newspaper (Medium II), and a radio station (CFRE). Two athletic directors supervise men's and women's athletics and recreation and the students have an Erindale College Athletics and Recreation Association (ECARA) which provides many activities. There are College sports teams as well as individual activities. Erindale's students are eligible to participate also in the University of Toronto's athletic teams.

Erindale College is fortunate to have a remarkably beautiful campus of 224 acres located on the west bank of the Credit River. Although it is situated within the City of Mississauga only 32 km west of the centre of metropolitan Toronto, the campus has an original natural beauty in its fine arboretum, extensive open spaces, and woodland trails.

The moderate size of the student body interacting with a faculty of about 200 enables the members of the College to get to know one another more readily than they might at a large institution.

We extend a warm welcome to all new and returning students and to visitors who wish to see and enjoy our facilities.

Paul W. Fox Principal



# 1 ADMISSION

# **Admission Requirements**

Written Enquiries:

Office of Admissions

University of Toronto 315 Bloor Street West Toronto, Ontario, Canada M5S 1A3 Telephone Enquiries:

Office of Admissions (416) 978-2190

Secondary Schools Liaison Office Erindale College (416) 828-5217

Details of the requirements for admission to the Faculty of Arts and Science are contained in the booklet entitled *A First Look*, copies of which are available on request from the Office of Admissions, and from the Guidance Officer at each secondary school in Ontario.

Further information concerning the requirements for admission is available from the Secondary Schools Liaison Office. Overseas applicants should request a copy of the *Undergraduate Admission Bulletin* from the Office of Admissions.

A brief summary of the admission requirements follows:

# Candidates Applying while Enrolled in Ontario Grade 13

For purposes of admission to the Faculty of Arts and Science, the University has arranged most Grade 13 academic subjects into the following groups:

Group A — English/Anglais - English as a second language

Group B - Languages other than English

Group C — Mathematics

Group D - Sciences

Group E — Other Humanities and Social Sciences

Group F - Other Subjects

Regulations Concerning Groups A through E

Grade 13 students seeking admission will be expected to present at least six Grade 13 credits, covering at least three of the above groups, and distributed as follows:

a) At least ONE credit from GROUP A;

- b) Additional credits chosen from at least two of B through E, and including at least ONE credit from either GROUP B or GROUP C. Students wishing to qualify under GROUP C must present at least ONE of Algebra, Calculus or Relations and Functions.
- c) No more than three credits in Mathematics or two credits in any other subject.

# Regulations Concerning Group F

Group F: OTHER SUBJECTS:
Accounting
Family Studies
Law
Multidisciplinary Studies
Other Arts Studies
Physical and Health Education

Provided the *regulations concerning GROUPS A through E* (above) are met, a Grade 13 student may present ONE credit from GROUP F for admission to the 1983-84 and 1984-85 Sessions. After 84–85, all but Accounting and Family Studies will no longer be accepted.

The following will not be accepted: Data Processing Marketing and Merchandising Other Business Studies Secretarial Practice Technological Studies

The average required for admission varies from year to year, but will be higher than 60%. In addition, a student's overall academic record may be taken into consideration. Applications will be considered from candidates whose qualifications do not meet the normal requirements, but such candidates will have to offer written evidence of exceptional ability, or of extenuating circumstances.

Students should choose Grade 13 subjects which will fulfil the prerequisites for university courses they intend to take. Such prerequisites are listed both at the end of this section and after the description of each course later in the Calendar.

Admission of Students whose First Language is Not English

An applicant whose first language is not English and who has studied in an English language school system for four years or less, and who enters from a school which does not offer a Ministry approved Grade 13 English must pass with an acceptable score a recognized test of facility in English, i.e. the University of Michigan English Language Test, TOEFL administered by the Educational Testing Service, or the Certificate of Proficiency in English issued by the University of Cambridge, whether or not they complete Grade 13 English.

## Admission with Transfer Credit

Candidates who have acceptable standing at other universities, or at other Faculties or Schools of this University including Scarborough College, may be considered for admission with transfer credit provided that the content of those studies is fully equivalent to that of one or more courses offered by the Faculty.

Note: Regardless of the number of transfer credits at least two of the required 300-or 400-series courses must be completed *in this Faculty*, with suitable standing for graduation with a Three-Year degree, and at least *five* such courses for a Four-Year degree.

# Admission as Non-Matriculants

Candidates at least twenty-one years of age who are Canadian citizens or permanent residents of Canada and who have never completed an Ontario Grade 13 programme, or its equivalent, and who have been resident in Ontario for at least one year, may apply for admission as non-matriculants. They will be asked to present proof of age, and will be required to complete, with high standing, at least one of the Pre-University courses offered by Woodsworth College, at either the St. George or Erindale Campus.

Information concerning the Pre-University courses may be obtained from the Registrar of Erindale College, the Office of Admissions, or from Woodsworth College, 119 St. George Street, Toronto, Ontario, M5S 1A9, (978-4444).

Admission as Special Students

Special Students are those registered in the College but not proceeding towards a degree offered by the Faculty of Arts and Science. Most are either studying here for credit at another institution or, having completed degree studies elsewhere, are taking further courses for purposes of their own. Further information concerning the requirements for admission is available from the Office of the Registrar, Room 2122, Telephone 828-5331.

## Admission of Senior Citizens

Candidates who are Canadian citizens or permanent residents of Canada, and who are at least sixty-five years of age, may apply for admission to the College as part-time Special Students. They do not have to meet any academic requirements for admission and, when admitted, will be exempt from the payment of academic fees.

### Admission "On Condition"

Students who have previously studied at another Faculty or University may be admitted "on condition". This affects their academic status until the end of the session in which they complete their fourth course in the Faculty. Until that time, a cumulative grade point average of less than 1.70 at the end of any session (summer or winter) results in academic suspension for one calendar year; on return, the student will again be "On Condition". At the end of the session in which the fourth course is completed, if the cumulative GPA is from 1.70 to 1.99 the student is placed on academic probation; if 2.00 or more the student is in good standing. Thereafter, the normal status rules apply.

Application should be made as early as possible in the year for which admission is sought. The final dates are:

Summer Session 1983 Summer Evening - March 31, 1983 Summer Day - May 15, 1983

Winter Session 1983-1984 Full-time - June 30, 1983

Part-time Studies
First term - June 30, 1983
Second term: - November 15, 1983

**NOTE:** Overseas applicants should apply at least six weeks before these dates. Candidates who use the application forms issued by the Ontario Universities Application Centre are warned that the completed forms must be received by the Centre on the dates listed above.

# **Secondary School Prerequisites**

Area of Study		Course	Grade 13 Prerequisite
Astronomy	AST120Y	Survey of Astronomy and Astrophysics	Mathematics R & F, Physics
Chemistry	CHM118Y CHM150Y	General Chemistry  Basic Concepts of Chemistry	Chemistry, Mathematics R & F Chemistry, Mathematics R & F or C
Computer Science	CSC139H CSC149H	Computer Programming Introduction to Computing	Grade 12 Mathematics Mathematics R & F and C
Earth & Planetary Science	EPS120Y	Introduction to Earth & Planetary Science	Mathematics R & F and Chemistry or Physics or Biology
Mathematics	MAT132Y MAT138Y	Calculus Calculus	Mathematics R & FandC Mathematics A and R & Fand C
Physics	PHY118Y PHY140Y	The World of Physics Principles of Physics	Mathematics R & F or C Physics, Mathematics R & F and C
Survey Science	SUR201H	Introduction to Surveying	Mathematics A and R & F and C, and Physics

NOTE: Languages: The study of many languages (e.g. French, German, Greek, Italian, Latin, Russian, Spanish) may be begun at the University. Those who have acquired skills in these languages before coming to the University will begin with higher-level courses.

# 2 PART-TIME STUDIES

# **Part-Time Studies**

# **Administrative Staff**

Division of Part-time Studies and Continuing Education
Director L.T. McCormick

Registration Office, Room 216, North Building, Telephone 828-5244 or 828-5295.

The Erindale Campus provides instruction for part-time students in most disciplines in the Faculty of Arts and Science.

Special Programme

The B.Sc. programme in Survey Science at Erindale offers courses in the evening for those interested in taking the degree or for those who wish to prepare for the examinations set by the Association of Ontario Land Surveyors. For a complete brochure on Survey Science, write: Division of Part-Time Studies, Erindale College, University of Toronto, Mississauga, Ontario, L5L 1C6.

### **General Information**

Part-time students have full access to all Erindale facilities and may choose to register in both day and evening courses. Three and one-half courses may be taken in the Winter Session, and two courses may be taken in the Summer Session provided no more than one and one-half are taken in any six-week period (term) during the Session.

Winter Evening courses meet once a week for two or three hours. The Summer Evening courses meet twice a week. There are two Summer Day Sessions, the A Session in May and June and the B Session in July and August. During Summer Day Session classes are usually held five days a week, in either the

morning or the afternoon.

Full details of the courses and programmes available to students in the Summer Session are contained in a publication entitled *Summer Session 1983*, which is available in Room 216, North Building.

Please consult the Course Descriptions in this Calendar for a complete description of all courses available at Erindale College and the St. George Campus Calendar for courses offered there. All courses are available to part-time students, subject to the general regulations for course enrolment.

# **Admission Requirements**

Each *new* student *must* apply for Admission through the Office of Admissions. The admission requirements are described in Section 1 of the Calendar.

# **Registration Procedures**

Summer Session registration forms and *Summer Session 1983* will be available in Room 216, North Building after February 1, 1983.

Degree students and Special students in Arts and Science with standing in the Faculty do not reapply for admission but follow the normal registration procedures unless they have not attended for two (2) successive sessions. In the latter case, they must apply for re-registration no later than one month before classes begin in the Session they wish to attend.

Special students in Faculties other than Arts and Science should consult their own Faculty for admission and registration procedures.

# Counselling

Please telephone 828-5244 to arrange for an appointment.





# **DEGREE REQUIREMENTS**

# Degrees

The following degrees are offered by the Faculty:

Degree	Abbreviation	Minimum Number Of Courses
Bachelor of Arts (Three-Year)	B.A.	15
Bachelor of Arts (Four-Year)	B.A.	20
Bachelor of Science (Three-Year)	B.Sc.	15
Bachelor of Science (Four-Year)	B.Sc.	20
Bachelor of Commerce	B.Com.	23

Further details are contained in the section on "Degree Requirements".

Degree Students — Those students registered in the College who are proceeding to the B.A., B.Sc., or B.Com. Degree.

Special Students — Those students registered in the College who are not proceeding to a degree in this Faculty.

### **Choosing Courses**

- 1. Each student may plan his own programme, selecting from among all courses offered, subject to the following rules:
  - (a) The degree and programme requirements, distribution requirements and other regulations set out in the Calendar and its supplements must be satisfied.
  - (b) All prerequisite, corequisite and exclusion requirements must be met.
  - (c) No more than six 100-series courses may be taken for degree credit.
- 2. Each student may proceed towards the degree at a rate of his own choosing, except as provided below:
  - (a) A full-time student in the Winter Session normally takes five courses and the maximum is six. Students in the Commerce and Finance Programme normally take five courses in the first Winter Session and six in the succeeding Winter Sessions.
  - (b) No student may take more than six courses in any one term in the Winter Session. "A" and "B" courses count double in computing term course loads.
  - (c) The maximum in the Summer Session is two courses, with a course load of not more than three in either term. Note particularly that two "B" courses (or one "B" and two "S" courses) may not be taken.
  - (d) A student who is on Academic Probation may take no more than five courses in the Winter Session except as provided under "Part-time Students" (Page 30).

3. All courses will be for degree credit unless:

(a) The course is a 100-series course and the maximum number of such courses allowable for degree credit has already been completed, or

(b) Advance permission has been given by petition for courses to be taken as "extra courses".

Courses already completed may not be designated as "extra" retroactively.

4. Students who do not intend to complete a course or courses must notify their Registrar promptly, in writing, before the final date to withdraw. Every year some students obtain a mark of "0" on their record because they did not notify their Registrar of their intention to delete a course.

5. Students may not repeat any course in which they have already obtained standing except for a 100-series course where a specific grade higher than "D" is required for entry to a limited-enrolment Programme. Under these circumstances a course may be repeated *once* as an "extra" course which will have no effect on the student's status or Grade-Point Average. There are no supplemental examinations or provisions to rewrite an examination to "upgrade" a mark.

5. Students who have taken or wish to take courses outside this Faculty should refer to the sections

concerning courses of other Divisions and other Universities.

**Programmes** 

All students entering Erindale in or after the Summer Session of 1980 (except students previously registered in the Faculty of Arts and Science) *must register* in a Programme or Programmes at the beginning of the session following that in which they *complete their fourth course* for degree credit. If admitted with transfer credit for four courses or more, this must be done immediately on admission. Such students also may (but are not required to) register in one three-course Minor Programme.

Students registered at Erindale before the Summer Session of 1980 may complete a Programme or Programmes, but are not required to do so; if they do so choose, they need not complete the Distribution

Requirement. (See below)

For further information on specific Programmes see Section 7, Courses and Programmes,

(pages 51 to 83).

Programmes previously known as "Minor" have been renamed "Major" Programmes. The Minor Programmes in this Calendar are optional for all students; one of them may be completed in addition to Major and/or Specialist Programmes.

Further information on Programmes appears on Page 52.

**Distribution Requirement** 

All students entering Erindale in or after the Summer Session of 1980 must complete a full course equivalent in each of the following Divisions:

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Classics Drama

East Asian Studies

English Fine Art

French German History

Italian Linguistics

Philosophy Religious Studies

Slavic Languages and Literature

Spanish

# Social Sciences

Anthropology\*
Commerce
Economics
Geography\*
Political Science
Sociology

\*Courses designated as Science for B.Sc. degree

count as Science for distribution requirement purposes

(see page 31)

## Natural Sciences

Life Sciences
Biology
Psychology

Physical Sciences

Astronomy Chemistry

Computer Science

Earth and Planetary Science

Mathematics Physics

Statistics

Survey Science

NOTE: "INE" courses do not qualify for any of these categories. ITA115Y does not qualify for the distribution requirement. GGR100Y and AST200H are designated a "science" for distribution purposes.

# **Responsibilities of Students**

While Departmental counsellors and the Registrars are always available to give advice and guidance, it must be clearly understood that the ultimate responsibility for completeness and correctness of course selection, for compliance with Prerequisite, Corequisite requirements, etc., for completion of Programme details, for proper selection of the Distribution Requirement and for observance of regulations, deadlines, etc., rests with the student. It is the student's responsibility to seek guidance from a responsible officer if he is in any doubt; misunderstanding, misapprehension or advice received from another student will not be accepted as cause for dispensation from any regulation, deadline, Programme or Degree requirement.

### Courses

The word "course" is used in two senses. In reference to a single course (such as "standing in a course" etc.) the word may be taken to refer equally to a full course or half course. In reference to a given number of courses (such as the requirement of obtaining standing in at least fifteen courses for a three-year degree) the word refers to a number of full courses or the equivalent number in full and half courses.

To "pass a course" or "obtain standing in a course" normally means to obtain a mark of 50 or more in that course ("Credit" in "Credit/No Credit" courses). Note that a grade of "C-" is required in a certain number of 300- and 400-series courses before a degree may be granted and that "Pass" or "Credit" does not count as a "C-" for this purpose.

# Prerequisites, Corequisites, etc.

Exclusion: A student may not enrol in a course which lists, as an exclusion, one which he is also taking or in which he has already obtained standing.

*Prerequisite*: A course (or other qualification) required as preparation for entry to another course. If a student considers that he has equivalent preparation, he may ask the Department concerned to waive the stated prerequisite.

*Corequisite:* A requirement to be undertaken concurrently with another course. The corequisite will be waived if a student has previously obtained standing in it or if the Department consents.

Recommended Preparation: Background material or courses which may enhance a student's understanding of a course.

Students are responsible for fulfilling prerequisites and corequisites and for observance of exclusions. Failure to meet these requirements may result in academic difficulties or, in the case of exclusions, refusal of degree credit. If a student withdraws from a course he must also withdraw from any course for which it is a corequisite unless the Department giving the latter course agrees to waiver of corequisite.

### Courses Offered on the St. George Campus

Subject to written approval from the Erindale Discipline Representative and the department concerned at St. George, students registered at Erindale who have completed 14 or more credits may take several courses on the St. George campus. Others are restricted to two or fewer. Students should consult the *Timetable and Registration Information* and their Registrar for details.

# **Courses of Other Divisions**

Certain courses offered in other Faculties and Schools of the University may be appropriate for degree credit in the programme of students in Arts and Science. After consulting an academic adviser, students should petition through the Office of the Registrar, if possible well before the beginning of the course(s) concerned. Permission to take such courses for degree credit will be granted when the student can establish that his particular aims are consistent with an Arts and Science programme but cannot be met by courses offered within the Faculty of Arts and Science. Acceptance of petitions to take graduate courses is further subject to the requirements of the School of Graduate Studies. Special Students may enrol through this Faculty only in courses given by this Faculty or Scarborough College.

# Courses of Other Universities (Letters of Permission)

A student who has obtained standing in at least a half-course in this Faculty and who finds that he will be living, temporarily, at such a distance that it will be impossible for him to attend classes, may request a Letter of Permission to register at another University for a maximum of five courses, depending on the number and level of the courses accepted on admission and completed in this Faculty. Degree credit for only one 300- or 400-series course will be given for work done while registered outside this Faculty.

Letters of Permission will not be issued to students who have a Cumulative Grade-Point Average of less than 1.50

A student seeking re-registration in the Faculty who has studied at another University since his last registration here must submit an official transcript with his application for re-registration, whether or not he intends to seek transfer credit. His status, including his eligibility to resume his studies in the Faculty, will be assessed including the results obtained in the courses taken elsewhere.

### **Part-time Students**

Students restricted to part-time studies on admission may not take more than  $3\frac{1}{2}$  courses in the Winter Session or two in the Summer Session. Otherwise they may proceed at their own rate and there is no time limit for the completion of degree requirements.

Part-time students wishing to transfer to full-time studies must apply through the Director of Part-time Studies and Continuing Education, Room 216, North Building. Students originally admitted to part-time studies, who at the time of admission did not hold qualifications for admission to full-time studies, may apply for transfer to full-time studies after completing at least four courses in the Faculty with a cumulative Grade Point Average of 2.00. (Transfer credits may not be counted).

# Calculating Course Load

For the purpose of calculating course loads, the following table should be used:

Suffix	Load per Session	Load per Term
Y	1	1
Н	1/2	1/2
A, B	1	2
F, S	$^{1}/_{2}$	1

As explained in the section on Key to Course Descriptions, the suffixes, A, B, F, S appear only in the Timetable and Registration Information and relate to the specific scheduling of the courses.

# **Degree Requirements**

# Three-Year Degree (B.A. or B.Sc.)

To qualify for a three-year degree, a student must

- (a) Obtain standing in at least 15 courses, no more than six of which are 100-series.
- (b) Obtain a grade of C or better in each of three 300- or 400-series courses, ("Credit" in a "CR/NCR ("Pass/Fail") course does not fulfill this requirement), and no more than one transfer credit may be counted):
- (c) Complete the requirements of a Major Programme or one three year Approved Area of Study unless first registered in this Faculty before the Summer Session of 1980.
- (d) Obtain a cumulative GPA of 1.50 or more, and
- (e) For the B.Sc. degree, take at least six 200- or higher series courses in Science, as defined below, if first registered in this Faculty before the Summer Session of 1980. For students first registered in or after the summer of 1980, the degree will depend on the **Programme(s) in which the student** graduates.
- (f) Complete a full course equivalent from each of the following Divisions: Humanities, Science, Social Science (not required of students who first registered in this Faculty before the Summer Session of 1980).

### Four-Year Degree (B.A. or B.Sc.)

To qualify for a four-year degree, a student must

- (a) Obtain standing in at least 20 courses, no more than six of which are 100-series,
- (b) Obtain a grade of C- or better in each of six 300- or 400-series ("Credit" in a "CR/NCR" ("Pass/Fail") course does not fulfill this requirement), and no more than one transfer credit may be counted);
- (c) Complete the requirements of a Specialist Programme or two Major Programmes, or one four year Approved Area of Study, or two three year Approved Areas of Study, unless first registered in this Faculty before the Summer Session of 1980.
- (d) Obtain a cumulative GPA of 1.50 or more, and
- (e) Complete a full course equivalent from each of the following Divisions: Humanities, Science, Social Science (not required of students who registered in this Faculty before the Summer Session of 1980). For students first registered in or after the Summer Session of 1980, the degree will depend on the Programme(s) in which the student graduates
- (f) For the B.Sc. degree, take at least nine 200- or higher series courses in Science, as defined below, if first registered in this Faculty before the Summer Session of 1980. For students first registered in or after the Summer Session of 1980, the degree will depend on the Programme(s) in which the student graduates.

Courses in Science for the B.Sc. Degree

The following are considered to be courses in Science for the purpose of determining eligibility for the B.Sc. degree and the Distribution Requirement for students first registered in the Faculty as of the Summer Session of 1980 and thereafter:

ANT203Y, 228H, 229H, 231H, 328H, 330H, 332Y, 334Y, 336H, 338Y, 339H, 430Y, 433H, 434H

APM; AST (except AST200H) BIO; CHM; CSC; ECO220Y; EPS

GGR201H, 202H, 205H, 206H, 207H, 212H, 214H, 276H, 280H, 300H, 301H, 302H, 303H, 304H, 305H, 307H, 312H, 373H, 374H, 376H, 377H, 379H, 381H, 383H, 491Y

MAT; PHY; PSY; SOC201Y; STA; SUR (except SUR250H, 350H, 351H, 450H, 455H, 458H)

Bachelor of Commerce Degree (B.Com.)

The programme in Commerce and Finance begins formally when a student has obtained four credits which include COM100Y, ECO100Y and MAT132Y. The cumulative GPA in all courses completed and the marks obtained in COM100Y and ECO100Y will be taken into consideration in admitting students to the Commerce Programme.

A student shall be qualified for a Bachelor of Commerce Degree when he has:

- 1. Completed the requirements of the Commerce and Finance programme, including no more than six 100-series courses:
- 2. Obtained a grade of "C-" or higher in each of at least six 300- or 400- series courses, ("Credit" in a CR/NCR ("Pass/Fail") course does not fulfil this requirement, and no more than one transfer credit may be counted)
- 3. A cumulative GPA of 1.50 or more.
- Completed at least one full course equivalent from each of the following Divisions: Humanities, Science, Social Science (not required of students who first registered in this Faculty before the Summer Session of 1980).

Choice of a Degree

A student may choose to have his degree conferred after having completed the requirements for either the three-year or four-year degree. A student who chooses to receive a three-year degree may continue his studies; completion of the four-year degree requirements will be recorded but he will not graduate a second time. A three-year degree leads only to a four-year degree in the same field, i.e. a three-year B.A. leads only to a four-year B.A. etc., though five courses taken towards a degree in one field may, on petition, be counted towards a degree in a different field.

# **Recognition of Exceptional Academic Achievement**

**Faculty Scholar** 

This designation is given to students in the Faculty of Arts and Science having a cumulative Grade-Point average of 3.50 or higher, at the end of each session in which the fifth, tenth, fifteenth and twentieth course has been passed. (For students enrolled in the Commerce and Finance Programme, the designation is given when the fifth, eleventh, seventeenth and twenty-third course is completed.) A certificate signed by the Dean of the Faculty will be sent to each such student.

# The Dean's Honour List

The following students are named each year on the Dean's Honour List at Erindale College:

- 1.) students who are enrolled in 5.0 or more courses in the Winter Session and who obtain a sessional Grade Point Average of 3.50 or more;
- 2.) students taking fewer than 5.0 courses, who, having completed their 5th, 10th, 15th, or 20th course during either the Winter or Summer Session, have maintained a cumulative Grade Point Average of 3.50 or more.

There is no monetary prize for students named on the Dean's Honour List however, a certificate is mailed to each student.

# Distinction

Students who graduate with a Cumulative G.P.A. of 3.20 to 3.49 are described as graduates "With Distinction".

# **High Distinction**

Students who graduate with a Cumulative G.P.A. of 3.50 or above are described as graduates "With High Distinction".

This is in addition to the many academically-based scholarships and other awards described in a separate publication.

# List of Abbreviations and Symbols

ANT — Anthropology

APM — Applied Mathematics

AST — Astronomy

BCH - Biochemistry

BIO - Biology

CHM - Chemistry

CLA — Classics

COM - Commerce CSC - Computer Science

DRM - Drama

EAS - East Asian Studies

ECO - Economics

EPS - Earth and Planetary Science

ENG — English

FAH - Fine Art History

FAS - Fine Art Studio

FRE - French

GER - German

GGR — Geography

GLG - Geology

GLL - Greek and Latin Literature GRH — Greek and Roman History

GRK - Greek

**HIS**—History

INE — Interdisciplinary Course (Erindale)

ITA - Italian

LAT—Latin
LIN—Linguistics

MAT - Mathematics

PHL — Philosophy

PHY—Physics

POL — Political Science PSY — Psychology

REL - Religious Studies

SLA - Slavic Languages and Literatures

SOC — Sociology SPA — Spanish STA — Statistics

SUR - Survey Science

WDW - Woodsworth College course

# **Course Suffixes**

A — full course given in the first term of a session

**B**—full course given in the second term of a session

F — half-course given in the *first* term of a session

H—half-course in Calendar; in the *Timetable and Registration Information* a half-course extending over both terms of a session

S — half-course given in the second term of a session

Y—full course extending over both terms of a session

Z—course for which no credit is given

## Types of Instruction

L — Lectures

S — Seminars

P— Practical work in laboratories or studios

T - Tutorials

In the Winter Session the normal period of instruction in full courses ("Y" in the Calendar) is 26 weeks; for half-courses ("H" in the Calendar) it is 13 weeks, although there are some half-courses which continue for 26 weeks. The numbers preceding the instruction codes opposite the course number and title indicate the total number of hours of instruction given in the course.

# Symbols Used in Course Description and Programme Requirements

PΙ Permission of instructor required to enrol

Open to first-year students (shown in margin of course descriptions) (I)

G Course available only on the St. George Campus

Comma, semi-colon, & (all mean "and") Solidus symbol - / (means "or")

### On Statement of Results or Transcript

AEG Aegrotat standing on the basis of term work and medical evidence

SDF Standing deferred — completion of course delayed for medical or similar reasons

WDR Late withdrawal with permission

XTR Extra course, not for degree credit

# 4 REGULATIONS

# Registration, Enrolment, Withdrawal

Registration refers to the process of establishing membership in a College of this Faculty for the purpose of attending courses and following a Programme of Study.

Enrolment is a separate procedure and refers to a student's formal undertaking to take a specific course or courses. Registration and enrolment procedures are detailed in the *Timetable and Registration Information*.

For the last dates for enrolment in and withdrawal from courses, students should consult the "Sessional Dates" at the front of this Calendar and in the "Timetable and Registration Information". Students whose circumstances are unusual may petition through the Registrar. Permission to register late in the Faculty, and to enrol in courses after the normal date, may be refused at any time.

Any student allowed to register one day after the end of the registration period will be charged a late registration fee of \$10.00; for each day thereafter the fee is an additional \$1.00.

All newly-admitted degree students are required to write an **English Proficiency Test** at the time of their first registration in the Faculty. Those who fail on the first attempt will be given opportunities to re-write the test for a fee of \$10.00. Those who do not pass within twelve months will be expected to arrange with their Registrar for appropriate counselling and assistance. Students who do not pass the English Proficiency Test within twenty-four months of their first registration in the Faculty will be *refused further registration* until such time as they pass the test.

Alternatively, students will be permitted to take a 13 week, non-credit English composition course designed to help improve writing skills; passing such a course will substitute for passing the English Proficiency Test. The courses will provide three hours of instruction per week and each section will be limited to twenty people in order to allow attention to individual needs. The sections will be scheduled at hours which will accommodate as many student timetables as possible.

Although there is a charge for this course the course is partly subsidized by the University.

Although these courses are intended primarily to help students who have failed or think that they will fail the English Proficiency Test, enrolment is voluntary. Students who do not want to take a course are only required to pass the English Proficiency Test. Of course those who simply want to improve the quality of their writing are also welcome.

Students who withdraw from a course or courses before the last date are entitled to a fees adjustment, the amount of which is determined by the date written notification of withdrawal is received by the Registrar. Every student who is still enrolled in a course after the final date to withdraw will receive a grade for that course, even if he stopped attending classes or did not write the examination. Full information on withdrawal procedures and fees adjustments may be obtained from the Registrar.

Students who find it necessary to withdraw altogether from the University, must notify their Registrar before the last day to withdraw listed in the "Sessional Dates." Merely ceasing to attend classes does not constitute withdrawal. Before any refund is authorized, they must:

- Pay any outstanding fees.
- Return any books to the Library and pay any outstanding fines.
- Surrender any Book Store charge cards and pay outstanding accounts.
- Surrender their Student Cards.
- Vacate any laboratory or athletic lockers and return any equipment in their possession.

### **Term Work**

All term work must be *submitted on or before the last day of classes* in the course concerned, unless an earlier date is specified by the instructor. Students who for reasons beyond their control wish to seek an extension of this deadline must consult their Registrar and petition if necessary (see "Aegrotat Consideration", page 37).

In order to avoid an undue concentration of work near the end of term, a wise student will organize his time and keep term work up to date throughout the session.

# **Transfer of Registration Between Colleges**

Students who wish to transfer to another College must request a transfer by petition through their Registrar. Last date to submit such a petition is July 1.

# Standing in Courses

Students are assigned a grade in each course as follows:

Percentage	Grade	Value	Grade Definitions
90-100	A+	4.3	
85-89	Α	4.0	Excellent
80-84	A-	3.7	
77 – 79	B+	3.3	
73-76	В	3.0	Good
70-72	В-	2.7	
67-69	C+	2.3	
63-66	C+ C C-	2.0	Adequate
60-62	C-	1.7	
57-59	D+	1.3	
53-56	D	1.0	Marginal
50-52	D	0.7	
	CD t		XX XX I
**Credit/No Credit:	CR*	0.0	No Value
35-49	E	0.3	Inadequate
0-34	F	0.0	Wholly Inadequate
**Credit/No Credit:	NCR	0.0	No Value

<sup>\*&</sup>quot;Pass" or "Credit" does not count as "C-" for purpose of degree requirements, but transfer credits and Aegrotat standing in 300/400 series courses do count as such.

Grades of "E" and "F" are both failures. There are no supplemental examination privileges in the Faculty.

Other notations which do not have grade point values are:

AEG AEGROTAT STANDING — on the basis of term work and medical evidence. (Rarely granted)

SDF (Previously SD) STANDING DEFERRED — completion of course delayed for medical or similar reasons.

<sup>\*\*&</sup>quot;CR" (Credit), "NCR" (No Credit) - These grades are assigned for courses in which only very broad evaluation distinctions in assessing the quality of student performance are judged appropriate.

WDR (*Previously W*) LATE WITHDRAWAL—without academic penalty\*. (These three may be authorized only by the Committee on Standing by Petition.) XTR EXTRA COURSE—not for degree credit.

\*Note: The petition in this case is not for permission to withdraw, but is for removal of the academic penalty in cases where the withdrawal has been caused by circumstances beyond the student's control, arising after the last date for normal withdrawal.

**Grading Regulations** 

The Committee on Academic Standards administers the Grading Regulations and reviews course grades submitted by Departments. The Faculty, through this Committee, is responsible for assigning the official course grades, which are communicated to the students by the Secretary of the Faculty.

Each Chairman appoints a departmental review committee to review grades submitted by instructors. The committee may ask for clarification of any anomalous results or distributions, or disparity between sections of the same courses. Both the departmental review committee, through the Chairman, and the Faculty review committee, through the Dean, have the right, in consultation with the instructor of the course, to adjust marks where there is an obvious and unexplained discrepancy between the marks submitted and the perceived standards of the Faculty. Final marks are official, and may be communicated to the student only after the review procedure has taken place. Grades, as an expression of the instructor's best judgment of each student's overall performance, will not be determined by any system of quotas.

As early as possible in each course and no later than the last date to add or withdraw from courses, the instructor will announce in a regularly scheduled class the methods by which student performance will be evaluated and their relative weight in the final mark, including any discretionary factor. These methods must be in accord with applicable University and Faculty policies. Once the weight of each component of the course work is given, it may not be changed unless approved by a majority of the students present and voting at a regularly-scheduled meeting of the class. After the last date to withdraw from the course without academic penalty, no change in weighting may take place unless there is unanimous consent of all students present and voting, and notice must be given at the regularly-scheduled class meeting previous to that at which the issue is to be raised.

All written work which has been evaluated should be returned with such detailed comment as the instructor deems appropriate, and time made available for discussion of it. Unclaimed term work must be kept by the instructor for six months beyond the end of the course. In courses where only one form of evaluation is used, a single piece of work should not normally count for all of the final mark. Self-evaluation and group evaluation, where permitted, must not have a combined weight of more than 50% of the final grade. Group evaluation will be allowed only with the consent of each member of the group and with permission of the Committee on Academic Standards.

Both essays (or equivalent work) and examinations (including term tests) are normally required for standing in courses. No term test having a weight greater than 25% of the final mark may be held in the last two weeks of classes at the end of any term. A Faculty final examination common to all sections of the course and counting for between one-third and two thirds of the final mark must be held in each 100-series course, unless exemption has been granted by the Committee on Academic Standards. In 200-, 300- and 400-series courses, the Departments will decide whether or not an examination is appropriate, and report to the Committee. The relative value of each part of a written examination must be indicated on the question paper. The ratio of term marks to examination mark will be the same for all sections of multi-section courses which have final examinations.

# **Averaging and Status**

**Grade Point Average** 

The Grade Point Average (GPA) is the weighted sum of the grade points earned, divided by the number of courses in which grade points were earned. A half-course will carry half the weight of a full course. No "Credit" in a "Credit/No Credit" course will be included. However, courses noted "AEG" or "PASS" or "Credit" are not included in the average, nor are transfer credits, courses taken on a Letter of Permission, or courses designated as "extra".

Two types of averages are used. The sessional GPA is based on the courses taken in a single session (summer or winter) while the cumulative GPA takes into account all courses taken for degree credit in the Faculty beginning with the 1976-77 Winter Session. Both the sessional and cumulative GPA are used at the end of each session (summer or winter) in assessing academic status and in determining the rate of progress toward the degree.

The sessional GPA will be identical to the cumulative GPA for purposes of assessing a student's academic status in the first session (summer or winter) in which that student is subject to the Faculty's GPA regulations.

The computation of an average will be delayed if "Standing Deferred" has been granted in any course.

### **Academic Status**

NOTE: Regulations Nos. 1, 2 and 3 apply to both Degree and Special students who have attempted at least four courses in the Faculty.

- 1. A student shall be on academic probation who
  - (a) Has a cumulative GPA of less than 1.50 or
  - (b) Returns from suspension.
- 2. A student who, at the end of any session (Winter or Summer) during which he is on probation
  - (a) Has a cumulative GPA of 1.50 or more shall come off probation
  - (b) Has a cumulative GPA of less than 1.50 but a sessional GPA of 1.70 or more shall continue on probation.
  - (c) Has a cumulative GPA of less than 1.50 and a sessional GPA of less than 1.70 shall be *suspended for one calendar year* unless he has been suspended previously, in which case he shall be suspended for *three* years.
- 3. A student who, having been suspended for three years, is again liable for suspension shall be *refused* further registration in the Faculty.
- 4. A student admitted *on condition* is subject to special conditions until the end of the session in which he completes his fourth course in the Faculty. (See page 23).

NOTE: There are two sessions (Summer and Winter) in each calendar year and status is assessed following each of them.

Students who are neither On Probation, Suspended nor Refused Further Registration are described as *In Good Standing*.

A student's status as established under the regulations in effect before the GPA system was adopted in September 1976, will remain unchanged until he has completed one full session (Summer or Winter) after September 1976, at which time it will be re-assessed in terms of the GPA, provided that at least four courses in total have been attempted.

Courses attempted are those in which a student remains formally enrolled on the last date for withdrawal, unless the academic penalty normally attached to a subsequent withdrawal is removed by petition.

A student who is on Academic Probation may take no more than five courses in the Winter Session.

# **Faculty Final Examinations**

Final examinations are held at the end of both terms in each session. Students who make personal commitments during the examination period do so at their own risk. No special consideration will be given and no special arrangements made in the event of conflicts. Information regarding dates and times of examinations will not be given by telephone.

### Rules for the Conduct of Examinations

- 1) No persons will be allowed in an examination room during an examination except the candidates concerned and those supervising the examination.
- Candidates must appear at the examination room at least twenty minutes before the commencement of the examination.
- 3) Candidates shall bring their signed student cards and place them in a conspicuous place on their desks. Candidates registered in the Faculty of Arts and Science must have a student registration card bearing their photograph.
- 4) Bags and books are to be deposited in areas designated by the Presiding Officer and are not to be taken to the examination desk or table. Students may place their purses on the floor under their chairs
- 5) The Chief Presiding Officer has authority to assign seats.
- 6) Candidates shall not communicate with one another in any manner whatsoever, during the examination.

- 7) No materials shall be brought into the room or used at an examination except those authorized by the Chief Presiding Officer or Examiner.
- 8) Candidates who bring any unauthorized material into an examination room or who assist, or obtain assistance from other candidates or from any unauthorized source, may not be permitted to write the remaining part of the examination or any subsequent examinations. They are also liable to penalties under the Code of Behaviour, including the loss of academic credit and expulsion.
- 9) Candidates will not be permitted to enter an examination room later than fifteen minutes after the commencement of the examination, nor to leave except under supervision until at least half an hour after the examination has commenced.
- 10) In writing out their answers, candidates shall write on the ruled pages only, and shall number their answers to correspond to the questions. On the outside of each book, they shall write their student number, their name unless instructed otherwise, and the course code of the examination, and shall number each book, indicating the total number of books used. Rough work may be done on unruled pages. All written work and unused examination answer books must be handed in.
- 11) Candidates shall remain seated at their desks during the final ten minutes of each examination.
- 12) At the conclusion of an examination, all writing within the answer books shall cease, and the Chief Presiding Officer may refuse to accept the papers of candidates who fail to observe this requirement.
- 13) Examination books and other material issued for the examination shall not be removed from the examination room except by authority of the Chief Presiding Officer.
- 14) Smoking in the examination room is not permitted.

### **Outside Centre Fee**

Each student who is granted permission to write an examination at a centre outside of Toronto must submit with his application a fee of \$15.00 for each paper to be written. Such permission is granted only in the most extreme circumstances.

### Petitions

Students should always consult their College Registrar for guidance if anything happens which interferes with continuing or completing their courses, or which appears to be contrary to rules, regulations and deadlines. Students are responsible for knowing the rules and regulations in the Calendar and its supplements; failure to observe them may result in academic and/or financial penalties. However, if a student has genuine difficulties beyond his control in complying with a particular regulation, he may petition that it be waived or varied.

Petitions are initiated in the office of the College Registrar and are considered in confidence by or on behalf of the Committee on Standing. This Committee is charged with interpreting and administering the regulations of the Faculty and may, in special circumstances, grant exceptions and attach conditions. The onus is on the petitioner to demonstrate the validity of his request; the Committee may refuse any petition by deciding that the grounds advanced do not support the request made. The authority of the Committee does not extend to the pedagogical relationship between instructor and student.

Decisions of the Committee may be appealed to the Academic Appeals Board of the Faculty and the Governing Council within six months of the date of the decision being appealed. Particulars of this procedure may be obtained from the College Registrar.

### **Aegrotat Consideration**

If the ability of a student to complete a course is affected by illness or domestic problems beyond his control, a petition may be made for consideration by the Faculty. If there are adequate grounds for the petition, the Department concerned will determine the status of the work already done and the steps, if any, that must be taken in order to complete the course.

Such petitions must be filed with the College Registrar on or before the last day of the relevant final examination period, together with a medical certificate which includes a statement that the student was examined at the time of the illness, or other evidence to support the petition. If necessary, the medical certificate or other supporting evidence may follow, but the petition must be submitted before the examination period ends, and late petitions will be rejected. Students will not be excused any part of the work of a course but as a result of the petition may be allowed additional time for its completion, or an alternative examination etc.

### Student Records

Academic Records of students are ultimately the property of the university. The policy ensures that a student's right to privacy in relation to his academic records is safeguarded as far as both internal university access and external public access is concerned.

Student Academic Records are information contained in an original transcript, in electronically stored records, and in the "official student academic record" as maintained within an academic division.

### Type of Documents or Information

- (a) Registration and Fees Forms
- (b) Results for each course and year
- (c) Applications for Admission and supporting documents
- (d) Results of any petitions and appeals
- Medical Information rele-(e) vant to a student's academic performance which has been furnished at the request of or with the consent of the student concerned. (Note that access to this type of material shall only be granted to members of the teaching and administrative staff with the prior expressed or implied consent of the student and, if applicable, in the case of a medical assessment, the originator (physician, etc.,) of such.

# Office at which Documents may be examined

College Registrar's Office

Faculty Office

Office of Admissions (Students may not examine nor have copies made of those documents that relate to their admission to the academic division concerned.)

Faculty Office/Erindale College Registrar's Office Erindale College Registrar's

Erindale College Registrar's Office

### Access

(a) Access by a student:

A student may examine and have copies made of his academic record as defined above, with the exception of that portion of the record which deals with his application for admission to the academic division concerned. A student's request to examine any part of his "official student academic record" shall be made in writing and shall be complied with within thirty days of receipt of the request. A student may challenge the accuracy of his academic record with the exception of the materials specifically excluded in section (c) above and may have his record supplemented with comments so long as the sources of such comments are identified and the official student academic record remains securely within the custody of the academic division. Reference to such comments would not necessarily appear on official academic reports such as the transcript or the Statement of Results.

(b) Access by University Staff:

Members of the teaching and administrative staff of the University shall have access to relevant portions of a student's academic records in the performance of their duties.

(c) Access by University of Toronto Student Organizations:
Student organizations in the University of Toronto may have access to all information available freely to persons outside the university (see below) and to the residence address and telephone number of the student.

(d) Access by others:

- (i) By the act of registration, a student gives implicit consent for a minimal amount of information to be made freely available to all inquirers:

  the academic division(s) and the session(s) in which a student is or has been registered, degree(s) received and date(s) of convocation.
- (ii) Any other information may be released to other persons and agencies only with the student's prior expressed written consent, or on the presentation of a court order, or in accordance with the requirements of professional licencing or certification bodies, or otherwise under compulsion of law. A record shall be kept of permission granted to any persons or agencies outside the university for access to a student's academic record.

(iii) General material drawn from academic records not disclosing the identities of students may be released for research and informational purposes.

### **Custody Of Student Academic Records**

Academic records are normally under the custodial responsibility of the academic divisions. Fifty years after a student has ceased to be registered, all records become the responsibility of the University Archivist and become open to researchers authorized by the University of Toronto.

### **Personal Information**

Personal information provided at the time of admission is verified and brought up to date by the College Registrar at the time of registration in subsequent sessions. This information is a vital part of the student's official University record and is used to issue Statements of Results, transcripts, graduation information, diplomas and other official documents. The University is also required by law to collect certain information for the Federal and Provincial Governments; this is reported only in aggregate form and is considered confidential by the University.

Any change in the following must therefore be reported immediately to the College Registrar:

1. Legal name

- 2. Permanent or home address and telephone number
- 3. Sessional address and telephone number
- 4. Social Insurance Number
- 5. Citizenship status in Canada
- 6. Marital Status

### Student Card

The student card is a wallet-sized card bearing the student's photograph, used for identification purposes within the University, such as evidence of registration in the Faculty and in a particular College, participation in student activities, Athletic Association privileges, and identification at Faculty examinations.

The loss of the student card must be reported promptly to the College Registrar, and the card must be surrendered if a student withdraws from the University or transfers to another College or Faculty.

### **Checking of Marks**

a.) Courses with Faculty Final Examinations:

After the issue of final results and within six months of the final examination period, a student may request from the Registrar's Office a reproduction of his final examination for a fee of \$10.00. If, upon inspection of this, he wishes to have the paper re-read, he must set down his reasons in detail and petition through his Registrar within six months after the final examination period. Such a petition will be granted only when it contains specific instances of disagreement with the existing grading and an indication of the academic grounds for such disagreement. If the mark is changed as a result of this petition, the \$10.00 fee will be refunded.

Students should note that when a course is failed, the examination must be re-read before the marks are reported, and instructors may not subsequently re-read any final examinations except

on the authority of a petition.

b.) All courses:

Within the six month period a student may request a clerical check of the calculation of the marks in a course, upon payment of a fee of \$10.00 per course. If an error is discovered, the fee for checking that course will be refunded.

Note: Students must accept the fact that any recheck or re-reading may lead to a lowering of the mark, or to a raising of the mark, or to no change.

# **Transcripts**

The transcript of a student's record reports the standing in all courses attempted, along with course size and course average, information about the student's academic status including record of suspension and refusal of further registration, completion of degree requirements and of a Programme.

Course results are added to each student's record at the end of the session. Transcripts issued during the second term do not include "A" and "F" courses completed in the first term.

Individual courses from which a student withdraws within the normal time limit are not shown. However, the date of withdrawal from a session (i.e. withdrawal from the last course in which a student was enrolled) is recorded. Therefore, when a student taking only a single course withdraws from it, the date is recorded since it constitutes withdrawal from a session.

Copies of the transcript will be issued at the student's request, subject to reasonable notice. Requests should be submitted in person or by writing the Faculty of Arts and Science, Sidney Smith Hall, 100 St. George St., Toronto M5S 1A1. There is no charge for transcripts issued within the University. A fee of \$3.00 (including tax) for the first copy, plus \$1.00 (including tax) for each additional copy ordered at the same time, will be charged for transcripts to all other destinations. Payment MUST accompany such requests. Transcripts issued directly to students do not bear the official seal of the Faculty. The Faculty Office cannot be responsible for transcripts lost or delayed in the mail. Transcripts are not issued for students who have outstanding financial obligations with the University.

### Office of the University Ombudsman

As part of the University's commitment to ensuring that, in spite of its size and complexity, the rights of its individual members are protected, a University Ombudsman has been appointed to investigate grievances or complaints against the University, or anyone in the University exercising authority, from any member of the University - student, faculty or administrative staff. The Ombudsman assists in resolving grievances or complaints, and can recommend changes in academic or administrative decisions where this seems justified. In handling a grievance or complaint, the Ombudsman has access to all relevant files and information, and to all appropriate University officials.

The Ombudsman also provides information to members of the University about their rights and responsibilities, and the procedures to follow in order to pursue whatever business or complaint they may have.

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All matters dealt with by the Ombudsman are handled in a strictly confidential manner unless the individual involved approves otherwise. The Ombudsman is independent of all administrative structures of the University, and is accountable only to the Governing Council.

In setting up the Ombudsman's Office, a special effort has been made to ensure that its services are readily accessible to all members of the University. The office is located at 16 Hart House Circle, just south of the SAC building. Members of the University at Erindale and Scarborough Campuses may arrange to meet with the Ombudsman at their respective campuses or at the St. George Campus, whichever is more convenient.

For information, advice or assistance, contact the Office of the University Ombudsman, University of Toronto, 16 Hart House Circle, Toronto, Ontario M5S 1A1. (Telephone 978-4874).

# Discipline

### Code of Behaviour in Academic Matters

The Governing Council of the University of Toronto has approved a Code of Behaviour regarding academic discipline applying to students and members of the teaching staff of the University. The full text of the Code is available from the Faculty Office and the Registrar's Office. The Code is enforced by the University Disciplinary Tribunal.

### **Academic Offences**

In order to protect the integrity of the teaching, learning and evaluation processes of the University it shall be an offence for any member knowingly

- to use or possess unauthorized assistance in any academic examination or term test or to use unauthorized assistance in any other form of academic work;
- 2) to represent as that of the member in any academic work submitted for credit in a course or programme of study, any idea or expression of an idea of another;
- 3) to submit for credit in any course or programme of study, without the knowledge and approval of the member to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course or programme of study in the University or elsewhere;

- 4) to submit for credit in any course or programme of study any academic work containing a purported statement of fact or reference to a source which has been concocted;
- 5) to forge or in any other way falsify any academic record of the University or to forge or in any other way falsify any academic record of another institution used for the purposes of the University of Toronto, or to utter or make use of any such forged or falsified records;
- 6) to remove books or other library material from a University library without proper authorization, to wilfully mutilate library material or misplace it, or in any other way wilfully to deprive other members of the University of the opportunity to have access to library resources.

### Sanctions

The following sanctions, listed in order of increasing severity, may be imposed by the Tribunal upon conviction of any student of any offence:

- a) Caution:
- b) Censure:
- c) Assignment of a mark of zero in academic work submitted for credit;
- d) Failure in or cancellation of credit for any course or other academic work in respect of which any offence was committed;
- e) Suspension from attendance in all courses in which the student is registered at the time the offence was committed for any period less than twelve months from the date on which the offence was committed, and loss of credit for any course or courses which have not been completed or in which no grade or final evaluation has been registered at the time the offence was committed;
- f) Suspension from the University for such period as may be determined by the Tribunal;
- g) Expulsion from the University.

**NOTE:** Withdrawal from a course will not preclude proceedings in respect of academic offences committed in the course, and the right to withdraw may be refused where an academic offence is alleged.



# 5 FEES

### **Tuition Fees**

Tuition fees are established by the Governing Council and set out in detail in the *Schedule of Fees*. Tuition fees normally consist of two parts: academic fees (including instruction and library) and incidental fees (including Hart House, Health Service, athletics, and student organizations). Additional fees may also be assessed to cover such items as instruments, microscopes, screening charges, field trips and special laboratory charges.

Fees are subject to change at any time by approval of the Governing Council.

The following information is intended only as a general guide and may be superseded by that in the Schedule of Fees, which should be consulted for accurate, detailed information. For further information telephone the Fees Office at 828-5202.

### Method of Payment

Payment must be made by *Money Order* or *Certified Cheque* in Canadian funds payable to "The University of Toronto"; all cheques must be *Certified*. Cash is accepted only if payment is made in person.

The amount of fees to be paid is determined by the number of courses to be taken. Students should consult the *Timetable and Registration Information* for instructions on completing the registration form and determining the fees payable.

### Payment Deadlines (For the Winter Session)

Fees are due prior to registration and may be paid in full or a minimum payment consisting of 60% of academic fees and 100% of incidental fees may be made as indicated on the Schedule of Fees. All accounts must be paid in full by January 15th.

In order to avoid delays and long line-ups students are advised to pay their fees early and by mail.

### Service Charges

Beginning September 15th all outstanding balances, regardless of the source of payment, are subject to a service charge of  $1-\frac{1}{2}\%$  per month compounded (19.56% per annum) calculated on the 15th of each month until the account is paid in full.

### Sanctions for Non-Payment of Fees

Students who have not paid their accounts in full may not receive official transcripts or diplomas and may not re-register at the University until these accounts are paid.

### Fees for Foreign Students

In accordance with the recommendations of the Government of Ontario, certain categories of students who are neither Canadian citizens nor landed immigrants are charged academic fees of approximately \$3,000.00 per session. Refer to the Schedule of Fees for details.

# Other Fees

### Residence Fees

Residence fees are separate and will be approximately \$1,290.00 per annum for townhouse accommodation in 1983-84. Meals may be bought in the College cafeterias or prepared in the townhouse kitchens.

### Use of Awards to Pay Fees

a) Ontario Student Assistance Programme

A student may pay his fees out of his own funds without jeopardizing his Government assistance in any way. A student wishing to use his Government awards to pay his first term fees, should enclose the "Notice of Assessment", which he received from the Ministry of Colleges and Universities, with his fees form and submit both to the Fees Office, Erindale College.

b) Scholarships and Bursaries

A student may apply to his fees any scholarship or bursary paid by or through the University. After deductions for any fees which may be outstanding, the balance, in the form of a cheque, will be mailed to the student by mid-November.

# 6 RESOURCES

# Counselling

College Registrar

The College Registrar is the focal point for information and advice of all kinds. The Registrar and the staff of the Registrar's Office are the experts on rules, regulations, degree requirements and everything that affects the student's academic life. Any question or problem that is affecting the student's academic progress such as a personal problem or a question about course selection, should be brought to the Registrar. All requests for special consideration because of circumstances over which the student has no control take the form of a "petition" and are initiated only through the Registrar. When in doubt ask your Registrar.

Registrar - Mrs. M.H. Cooper, Room 2122, South Building
Assistant to the Registrar - Mrs. M.A. Gammon, Room 2122, South Building
Director of Part-time
and Continuing Studies - Prof. L.T. McCormick, Room 2122, South Building

**Faculty Advisers** 

Faculty Advisers and Discipline Representatives can give more detailed advice on individual courses and on the programmes that are centred in their Departments. Their names will be found at the beginning of the essay of each discipline in the main body of this Calendar. Many disciplines publish brochures outlining their courses and programmes in more detail than is possible in the Calendar and these are available at their offices. Students are often directed, as well, to individual instructors for counselling about their courses.

**Teaching - Learning Centre** 

The Teaching - Learning Centre is designed to help students and faculty with their academic work. It is located in Room 3094 in the South Building and it offers advice about writing, learning and teaching. The Centre is open Mon. - Thurs., 10 - 12 noon, 1 - 3 p.m. during the Winter Session for details about the following:

Study Skills

Seminars on time management, effective note-taking, preparing for and writing exams.

START Seminars

Tips on researching and planning essays and reports.

Teaching Seminars

Advice on teaching techniques for lecturing or conducting tutorials.

Writing Lab

Individual and group help in writing essays and reports.

Writing Laboratory

Effective writing is a key to success in university. For those students who sense that their writing needs improvement, or who want advice about writing assignments, Erindale has a Writing Laboratory.

Tutors in the Lab give individual help and small group seminars on such concerns as:

organizing essays preparing reports avoiding grammatical errors improving writing style

For an appointment in the Writing Lab or for details about writing or study-skills seminars, call 828-5444 or go to Room 3094, South Building.

### **Professional Faculties**

Professional faculties or schools such as Dentistry, Education, Law, Library Science, Management Studies, Medicine or Social Work admit only graduates or students who have completed certain preparatory work in the Faculty of Arts and Science. Their calendars should be consulted for details on specific requirements.

# Career Counselling And Placement Centre

**Erindale Campus:** 

St. George Campus:

Room 3094, South Bldg.

344 Bloor Street West, 4th Floor

828-5451 (Bloor at Spadina)

978-2537

Career Counselling

The Career Counselling and Placement Centre offers career planning and summer, part-time and permanent job placement services to students and graduates of the University of Toronto.

Career Planning and Information

First year is not too early to start thinking about occupational options and routes. Common questions are - What do I want to do and what can I do? How do I prepare and look for what I want? Whether struggling with indecision or needing help with the job search process and preparation, we can help. Attend our workshops or call for an appointment.

Watch for the Careertalks programme in which practitioners in a broad range of fields are available with useful information.

Career Library

Information about careers, further education, employers, the job market and much more.

Review surveys of graduates by discipline to see where they are working and what they are doing. Look into our past summer and permanent job listings with full details of opportunities by discipline and job type.

Our employer directories section focuses on names of companies in specific work environments.

Check out our University and College calendar section if further studies are in your plans.

### Job Placement Services

Summer, Part-time and Temporary Jobs

Here is your opportunity to enhance your knowledge of the work world, develop skills and experience to increase your marketability in the long run.

Over 5,000 summer positions are listed year round beginning as early as October. Start early so you do not miss out.

If you wish to do private tutoring or home typing, register with the Centre for referrral to those who need vour skills.

### Permanent Employment

TWO placement services are available for those seeking permanent employment.

a) The Permanent On-Campus Recruitment Programme

This programme is for students in their graduation year who are legally eligible to work in Canada. Representatives from 200 to 300 companies visit the University of Toronto campus annually to recruit employees. Examples of the types of employers who take part are banks and insurance companies, merchandising and retail operations, forestry, mining and oil companies, manufacturers, construction industries, communications agencies and chartered accountancy firms. The federal and provincial governments also have university recruitment programmes.

The programmes begin in September, even though the jobs do not start until after graduation. Check early so as not to miss good opportunities. On-Campus Recruitment is usually the major method used by these companies to hire new university graduates.

b) Permanent Job Registry

The Permanent Job Registry is a year-round service for University of Toronto graduates seeking immediate employment. Opportunities listed represent all sectors of the employment market.

The Registry receives over 2000 job listings each year and offers assistance in planning and conducting an effective overall job search.

# **Scholarships and Other Awards**

Full information on scholarships and other awards is printed in the Erindale College Awards Bulletin. Copies may be obtained from the Awards and Financial Aid Office, Room 211, North Building, and the Registrar's Office, Room 2122, South Building.

# The Ontario Student Assistance Programme

The components of the Ontario Student Assistance Programme are as follows:

- 1) The Ontario Study Grant Plan
  - The main purpose of the Ontario Study Grant Plan is to provide non-repayable grant assistance to students from less affluent families, normally for their first four years of post-secondary education.
- 2) The Canada Student Loans Plan
  - The main purpose of the Canada Student Loans Plan is to provide need-tested loan assistance up to and including the doctoral level of study. Students who have reached "independent status" can be assessed for loan assistance without reference to their families' income.
- 3) The Ontario Student Loans Plan
  - The main purpose of the provincial loans plan is to make need-tested loan assistance available to students who are not covered by the Canada Student Loans Plan. Normally this will include students taking less than 60% of a normal course load and some full-time students whose needs are not fully met by the Canada Student Loans Plan.
- 4) The Ontario Special Bursary Plan
  - The main purpose of the Special Bursary Plan is to ensure that particularly needy part-time students receive grant assistance. There will continue to be an upper limit on the number of courses that a student can take (3 full credit courses or their equivalent) and students will not be able to receive financial assistance from both this programme and the Ontario Study Grant Plan at the same time.

All students who are attending the University of Toronto may qualify for aid under one or more of these plans provided they satisfy the residency requirements as outlined in the Ontario Student Assistance brochure and demonstrate financial need. Students wishing to apply under the Ontario Study Grant Plan, the Canada Student Loans Plan or the Ontario Student Loans Plan can do so on the same application form. Students intending to apply under the Ontario Special Bursary Plan should contact the Student Aid Office (828-5234) or the Office of Student Awards (978-5583) directly to arrange a personal interview.

Application forms and brochures are available in April and can be obtained from the Awards and Financial Aid Office, Room 211, North Building (Tel.828-5234) or from the Office of Student Awards, University of Toronto, Room 107, Simcoe Hall, Toronto M5S 1A1 (Tel. 978-2204).

For further information on financial aid please obtain a current copy of the Erindale College Awards Bulletin from the Awards and Financial Aid Office, Room 211, North Building or the Registrar's Office, Room 2122, South Building.

### **Miscellaneous**

### Library

Erindale College Library has an excellent and ever-growing collection of books, periodicals, film strips, cassettes, clippings and other materials now numbering 227,000 items. This extensive library is staffed with people trained to help the student use the Library's resources.

In addition to the College Library, students and faculty have access to more than three million volumes of the University of Toronto Libraries on the St. George Campus. There is a regular book delivery service from the University of Toronto Libraries to the Erindale Campus. Telephone 828-5239.

**University Health Service** 

The University Health Service offers a comprehensive medical service for students on the Erindale Campus; treatment and advice are available September through May. Students are encouraged to discuss their concerns about contraception, drug problems, unwanted pregnancies, sexual life and venereal disease.

Psychiatric consultation and counselling to assist the students with emotional and social problems are readily available. Students seek counselling for a wide range of concerns, including feelings of despondency, apathy, inadequacy or inferiority and with problems in areas of sexuality, drug use, parental conflict, dating, peer relationships, inability to concentrate and examination anxiety.

The primary responsibility of the Health Service is to the student; therefore, all consultations, medical and psychiatric, are strictly confidential and form no part of any "University Record". Information acquired from students will not be given to anyone at any time without the written permission of the student.

Health Service Hours

Monday to Friday 9:00 a.m. - 5:00 p.m. Telephone 828-5255.

After 5:00 p.m. Telephone 978-2458.

Athletic Requirements

Physical examination is recommended for those taking part in competitive body contact sports.

### Athletics and Recreation

The Athletic and Recreation Department in conjunction with the Erindale College Student Athletic and Recreation Association (ECARA) is responsible for the planning and operation of programmes for the Erindale College community.

The programme is wide in scope, including instruction, activity clubs, intramural leagues for men and women, and college teams. With the exception of the ice hockey and rowing, athletic programmes take place in the physical facilities on campus which include a gymnasium, weight training room, teaching studio, therapy centre, archery range and fitness testing laboratory. Outdoor facilities include playing fields, outdoor swimming pool and six tennis courts. At present, Erindale College teams compete in all University of Toronto interfaculty leagues and with other colleges and universities on an exhibition basis.

In addition to the facilities and programmes on the Erindale campus, students may use the facilities on the St. George campus, as well as participate in their on-campus and intercollegiate programmes. For inquiries about the athletic programme, telephone 828-5268/9.

### Residences

Erindale College offers unique residence accommodation for up to 428 students. Townhouse style residences make it possible for students to share expenses on a co-op basis. Students have estimated they can save up to \$250 per year by preparing their own meals. Each house also governs itself cooperatively.

Four-person houses have four single study-bedrooms, plus living room, kitchen and dining areas. Sixperson units are made up of two single study-bedrooms, two double study-bedrooms, plus communal kitchen and living areas. There is a common laundry facility for each eight units.

Residences are just a few minutes' walk from the library, classrooms, and cafeterias.

Costs are approximately \$1,290 per year, September to May, 1983-84.

For further information contact the Housing Office, Colman Place, Erindale College, Mississauga Road, Mississauga, Ontario, L5L 1C6 or telephone 828-5286.

# **Campus Organizations**

Responsibility for recognition of organizations where the membership is drawn from a single College, Faculty or School rests with the Council of that division. Where University-wide organizations (or organizations drawing members from more than one division or constituency of the University) are concerned, responsibility is vested in the Campus and Community Affairs Committee of the Governing Council.

Eligibility for recognition is assessed annually. The constitutions of every society or association, and all subsequent amendments to such constitutions, shall be submitted to the appropriate administrative officer for perusal. The objectives and activities of groups seeking recognition should be seen as attempting to contribute to the educational, recreational, social or cultural values of the University. Membership in groups should be open to all members of the University community without restriction on the grounds of national origin, race, religion, colour, or sex. Status as non-voting members may be extended to interested persons from outside the University.

# Students' Administrative Council (SAC)

The Students' Administrative Council is the central student government for all full-time undergraduates. Members are elected from their local college or faculty. The SAC office is in the Old Observatory, on the St. George campus, across from Hart House, and is open all day to provide information and assistance. SAC also maintains three other central points of focus for both tickets and information: the Information Desk (in cooperation with ECSU) in the South Building Meeting Place at Erindale, the SAC Office or "Room Under The Stairs" at Scarborough, the Information Desk at Sidney Smith on the St. George Campus.

SAC provides a variety of services, including concerts, films and speakers at all three campuses, as well as representing the interest of all students both at the university and off campus. Further information with respect to SAC services and information regarding the university in general is provided in the SAC

Student Handbook, available in the fall to all students.

The SAC publishes a Student Directory containing the names, addresses and telephone numbers of all students, which is available in the late fall. Students who wish their names to be omitted should send a written request to the SAC office or the Office of Statistics and Records in the early fall. (Telephone 978-4911).

The Erindale College Student Union (ECSU)

The Erindale College Student Union serves as an important link between students and the administration of the College and University. Elections are held yearly to select officers who provide for the cultural, academic and social needs of the students. ECSU sponsors *Radio Erindale*, a newspaper, various clubs, concerts, lectures, and a pub, *The Campus Centre*. It is an organization that tries to stimulate student interest outside of the classroom, with programmes that are student-oriented directed towards encompassing the entire campus community and in some instances the local community of Mississauga. All undergraduate students of the College are members of ECSU and are entitled to attend meetings, sit on commissions and vote in the general election of officers to the Union.

Located in the Crossroads Building, ECSU is open all year around for the greater benefit of students.

Telephone: 828-5249.

### Student Publications and Media

Medium II, is the weekly student newspaper at Erindale College which focuses on campus and community events, news, reviews and features. Any student interested in learning how to write for a newspaper in the field of news, sports, reviews of literary and cinematic events or in selling advertising and managing the business affairs of a small paper is welcome to join the paper. Medium II uses its independence to bring issues of the day to the College community and offer critical commentary on those issues. Medium II is located in between the College Theatre and the Campus Centre. Call 828-5260 if you would like to join us.

The Erindale Review is an annual journal that contains poetry, prose, drama, and criticism written by students, faculty, and professional writers. Student submissions and assistance with the production of the Erindale Review are welcomed and encouraged. For further information contact the English

Department in the North Building.

*CFRE* (Radio Erindale) is a closed circuit radio system broadcasting campus-wide from 8 a.m. to 10 p.m. from Colman Place. Telephone 828-5411.

All students are encouraged to assist in the successful operation of the above projects.

The Association for Part-Time Undergraduate Students

The Association for Part-time Undergraduate Students (APUS) represents all part-time undergraduate students at the University of Toronto. The Association works on a class representatives system; an executive committee is elected annually from the Assembly of Representatives. APUS publishes a newsletter *Voice* every two weeks, an annual *Handbook for U of T Part-Time Undergraduates*, and a semi-annual Course Evaluation.

Sessional Office Hours 9:00 a.m. - 9:30 p.m. Non-Sessional Office Hours 9:00 a.m. - 5:00 p.m.

APUS is located in Room 1089, Sidney Smith Hall. Telephone - 979-3993.

# The Erindale Part-time Undergraduates Students' Association

EPUS is an independent organization of part-time students at Erindale College. It is funded through the APUS fees paid by Erindale APUS members - a portion of their \$10.00 fee is rebated to EPUS.

EPUS has a four person Executive Committee and operates on a class representatives system similar to APUS. The EPUS office is located in room 137, in the North Building. The hours are: Monday through Thursday - 1:00 p.m. to 9:00 p.m., and coffee is available in the office during these hours. The EPUS telephone number is 828-5422.

### International Student Centre

The International Student Centre, 33 St. George Street (978-2564), provides a meeting place for students from Canada and abroad to come together in organized programmes or informal gatherings in a multicultural setting. The "International community" on the campus can find there ample opportunity to exchange ideas, to demonstrate their cultures, and to relax together.

There is no membership fee and all students, Canadian and foreign, graduate and undergraduate, are welcome to use any of the facilities at ISC, and to participate in its activities.

The Centre provides, for a nominal fee, an English Language Programme for students requiring assistance in this area. The staff of the Centre can also advise on other English programmes available in Toronto.

The staff are also available to discuss with students any questions or concerns including immigration matters, and when necessary will refer them to the appropriate person or agency. The office of the Foreign Student Adviser is located in the Centre, as is the office of the Canadian International Development Agency Coordinator.

The Centre's International Work Study and Travel Information Service (*Interchange*) provides students and other members of the University with information about the wide range of opportunities available for experience abroad.

# COURSES AND PROGRAMMES

# **Key to Course Descriptions**

Students are urged to read the course descriptions completely and carefully, paying particular attention to exclusions, prerequisites and corequisites. Some higher-series courses are available to first year students and are marked with a (I) in the margin. Others may also be open to first or second year students if no specific prerequisites or restrictive notes are indicated.

The course code (or identifier) is the group of three letters, three numbers and a final letter shown in the margin beside each course description. This code is used almost everywhere to speed identification of a student's programme.

The descriptions which follow refer to courses taught at Erindale College. "(G)" after the course code in the text indicates a course appearing only in the St. George calendar.

### **Course Designations**

The 3-letter prefix normally indicates the Department or College responsible for the course. Where a department offers instruction in two or more disciplines, the designation indicates the discipline but the name of the department is stated below the heading, e.g. APM represents Applied Mathematics which is given by the Department of Mathematics. Courses offered jointly by two departments have designations starting with J.

The 3-digit number generally indicates the level of difficulty of the course: e.g. a 100-series number would normally indicate an introductory course.

The single letter suffix in this Calendar indicates the credit value only:

Y — a full course for which one credit is given

H—a half-course for which one-half credit is given

Z-a course for which no credit is given

### A suffix "Y" in the Calendar:

- Remains a "Y" in the Timetable and Registration Information if the course is offered throughout a session
- 2. Becomes an "A" in the *Timetable and Registration Information* if the course is offered in the First Term
- 3. Becomes a "B" in the Timetable and Registration Information if the course is offered in the Second Term

### A suffix "H" in the Calendar:

- 1. Remains an "H" in the *Timetable and Registration Information* if the course is offered throughout a session
- 2. Becomes an "F" in the *Timetable and Registration Information* if the course is offered in the First Term
- 3. Becomes an "S" in the *Timetable and Registration Information* if the course is offered in the Second Term

### **Types and Duration of Instruction**

L—Lectures

S—Seminars

P—Practical work in laboratories or studios

T - Tutorials

In the Winter Session the normal period of instruction in full courses ("Y" in the Calendar) is 26 weeks; for half courses ("H" in the Calendar) it is 13 weeks, although there are some half-courses which continue for 26 weeks. The numbers preceding the instruction codes opposite the course number and title indicate the total number of hours of instruction given in the course.

The Timetable Section of the *Timetable and Registration Information* should be consulted for specific scheduling information.

### **Explanation of Symbols**

P.I. Permission of the Instructor required for enrolment

/ Means "or" & or, Means "and"

(I) May be taken by first year students

(G) A course offered only on the St. George Campus.

# **Programmes of Study**

### General

Each student entering Erindale in or after the Summer Session of 1980 (except students previously registered in the Faculty of Arts and Science at another College) must register in a Specialist or Major Programme or Approved Area of Study upon passing his fourth course, and must complete it as a requirement for graduation. Candidates for a four-year degree must complete at least one Specialist or two Major Programmes; candidates for a three-year degree must complete at least one Major Programme.

Students registered in the Faculty before the Summer Session of 1980 may complete a Programme or Programmes, but need not do so as a requirement for graduation. The sponsoring Department(s) may permit such students to follow the Programme requirements printed in the 1979-80 Calendar, or a suitable variation of them, if they wish to do so. Regardless of the Programme being followed, they need not complete the Distribution Requirement. Since Programme registration is not compulsory, completion will appear on such a student's record only when the sponsor(s) so inform the Faculty Office at the time of the student's graduation.

### **Distribution Requirement**

Students whose first registration at Erindale is in or after the Summer Session 1980 (unless previously registered in the Faculty at another College) must complete at least one full course equivalent from each of the following Divisions: Humanities, Science, Social Science.

Individual Approved Areas of Study

Students wishing to pursue a programme other than (or in addition to) those afforded by the disciplines and the Approved Areas of Study listed below may make application for an individual Approved Area of Study, to consist of five to seven full-course equivalents (including prerequisites) for a three-year Approved Area (M04085), nine to sixteen full-course equivalents (including prerequisites) for a four-year Approved Area (S04085). Such students should prepare for their Dean, through whom formal application will be made, a coherent grouping of courses designed to meet their individual needs.

# Specialist, Major, Minor Programmes and Programme Codes

### Animal Behaviour (B.Sc)

(Consult Department of Psychology)

Specialist programme (Interdisciplinary) S24755

10 ½ full courses or an equivalent number of half courses are required in a 4-year programme of 20 courses:

PSY100Y, BIO100Y

BIO251Y, PSY252H

(PSY201H, 202H)/(BIO360H, 361H)

PSY290Y

BIO322H, 323H

BIO340Y

BIO321Y/(PSY390H, PSY399H)

JPB359Y

PSY400Y/(BIO480H, BIO481H)

Other BIOLOGY and PSYCHOLOGY courses of direct interest to students in Animal Behaviour Specialist Programme include:

BIO230H, 231H, 235Y, 300H, 301H, 333H, 351Y, 354H, 422H, 424H, 431H, 442H, PSY260H, 280Y.

# Anthropology (B.A. or B.Sc., according to selection of courses)

Specialist programme \$17755

9 courses are required in a programme of at least 20 courses:

ANT100Y

ANT203Y, 204Y, 226Y, and at least one of ANT207H, 228H, 231H, and any other courses in Anthropology.

Major programme M17755

6 courses are required in a programme of at least 15 courses:

ANT100Y

ANT203Y, 204Y, 226Y and any other courses in Anthropology

### **Art and Art History**

See also Fine Art

### Astronomy (B.Sc.)

Major Programme M22045

Seven courses are required in a programme of at least 15 courses.

AST120Y, MAT138Y, PHY140Y

EPS237H, MAT214H and 233H/235Y/239Y, PHY231Y

AST320H and any two of AST225H(G), AST210H(G), AST251H, and AST323H(G).

(AST225H(G) is strongly recommended.)

For the purposes of this major programme, AST321H(G) and 322H(G) are considered equivalent to EPS237H and AST320H, respectively.

### Astronomy and Physics (B.Sc.)

Combined Specialist Programme S02715

16 courses are required in a programme of at least 20 courses:

AST120Y; MAT138Y; PHY140Y

AST225H(G); EPS237H; MAT239Y; MAT214H/APM251Y; PHY224H, 231Y, 254H, 256H

AST320H; APM311H/351Y; MAT334H; PHY326H, 340Y, 352Y, 351H, 354H

AST420Y(G), 425H; one of PHY470Y, 471Y or a 450 series PHY course on the St. George campus.

Students are urged to satisfy their distribution requirements in their first year.

Biochemistry (B.Sc.)

(Consult Department of Chemistry)
Specialist programme S17625

12 courses required in a programme of at least 20 courses: BIO100Y; CHM150Y; MAT132Y/138Y; PHY118Y/140Y

CHM226Y: CHM240Y/241Y: CHM230H recommended

CHM340Y (if CHM240Y has been taken); CHM347H, 360Y, 371H and one 300-series BIO/CHM/PSL

BCH471Y(G) and four of BCH421H(G)-430H(G), CHM447H in the years when BCH424H is not offered.

NOTE: CHM241Y satisfies all the requirements in Organic Chemistry. Exemption from the CHM230H corequisite for CHM241Y may be obtained for students in this programme by application to the Chemistry Department. If CHM240Y is taken instead of CHM241Y then CHM340Y must also be included in the programme.

The Biochemistry Specialist programme can be taken wholly at Erindale for the first three years but

students must take their fourth-year courses on the St. George Campus.

Biology (B.Sc.)

Specialist programme S23645

16 courses are required in a programme of at least 20 courses; 12 from the *core* programme and 4 *additional* Biology courses. Students are encouraged to gain expertise in a specific area of Biology by structuring their *core* and *additional* courses around one of the areas of concentration listed below.

Core Courses (12)

BIO100Y; CHM118Y/150Y; MAT132Y/138Y; PHY118Y/140Y

BIO230H, 241Y

Three of BIO235Y, 250Y, 251Y, 270Y One of CHM221Y, CHM240Y, PHY210Y

One of BIO320Y, 321Y, (352H & 353H), 370Y

BIO340Y, 360H

Additional Courses (4) 4 Biology Courses

### AREASOFCONCENTRATION

Ecology and Field Biology			Organismal Biology	Genetics & Cell Biol
General	Plant	Animal		
BIO 231H	BIO 330Y	BIO 323H	BIO 321Y	BIO 352H
235Y	355H	333H	335H	353H
300H	430Y	431H	351Y	370Y
301H	456H	432H	354H	371H
302H		322H	355H	440Y
303H		422H	356H	455Y
332Y		JPB 359Y	421Y	470Y
361H				CHM 240Y
433H				360Y
435H				
460H				

1) Of the remaining 4 options available (20 credit programme) one must be a course offered by the Division of Humanities and one must be a non-Biology course from the Division of Natural Sciences or Social Sciences. Courses in cognate studies such as Computer Science, Physics, Chemistry, Earth and Planetary Sciences, Psychology and Anthropology are recommended as valuable non-Biology options and may also be used as substitutes for not more than two Biology options.

2) Certain courses in other departments may be considered as BIO courses i.e. CHM360Y, JPB359Y. Students should consult with the faculty advisors before registration if they wish to substitute a non-

Biology course for a Biology option.

3) Environmentally-oriented students should consider including BIO235Y (Field Biology) in their first year programme.

4) No substitute statistics course will be allowed for BIO360H except under extenuating circumstances.

5) Students who wish to switch from the Specialist to the Major Programme in Biology have to satisfy the requirements of the latter. It is recommended therefore that all students in the Specialist Programme fulfill the requirement for the Major Programme within the first three years of their study.

Erindale 100 and 200 level BIO courses (and BIO360H-361H) will be treated as equivalent to corresponding St. George campus courses in satisfying requirements for the following St. George specialist programmes: Biology and Mathematics, Biology and Physics, Microbiology, Nutrition and Food Science, Paleontology, Pharmacology, and Physiology. Students who intend to begin these programmes at Erindale should consult a Biology advisor as early as possible.

Major programme M23645

7 courses are required in a programme of at least 15 courses:

BIO100Y; CHM118Y/150Y; MAT132Y/138Y.

BIO(230H & 231H)/241Y.

Two BIO235Y, 250Y, 251Y, 270Y.

One of BIO320Y, 321Y, 340Y, (352H/353H), 370Y.

Chemistry (B.Sc.)

NOTE: To fulfill the requirements of any programme a student must take at least two full CHM courses (or their equivalent) at the 200- level.

Specialist programme S13765

15 courses are required in a programme of at least 20 courses:

CHM150Y; MAT132Y/138Y; PHY140Y

CHM215H, 226Y, 230H, 241Y; MAT214H and 233H/235Y/239Y/APM251Y

(PHY231Y/another 200-series course in Science/Mathematics recommended for inclusion in either Second or Third year)

CHM321Y, 330Y, 340Y, 360Y/another Science or Mathematics course

CHM419Y; two additional 400-series CHM full-course equivalents and one additional CHM/MAT/another Science course or equivalent

Major programme M13765

7 courses are required in a programme of at least 15 courses:

CHM118Y/150Y, MAT132Y/138Y, CHM215H, 226Y, 230H, 240Y/241Y

Two of CHM314Y, CHM321Y, 330Y, 340Y, 360Y

NOTE: Limitations on CHM118Y as a prerequisite for 200-series CHM courses.

MAT prerequisite for CHM321Y. For a balanced training in Chemistry, students should take CHM321Y, 330Y and 340Y.

# Chemistry and Biochemistry (B.Sc.)

Specialist programme S12135

15 ½ courses are required in a programme of at least 20 courses:

CHM150Y; BIO100Y; MAT132Y/138Y; PHY140Y

CHM215H, 226Y, 230H, 241Y; MAT214H and 233H/235Y/239Y/APM251Y

CHM321Y/330Y; 340Y, 347H, 360Y, 371H

CHM447H(G)/BCH424H(G); one of BCH471Y(G)/CHM419Y; one additional BCH400(G)-series half-course; one additional CHM400-series half-course (preferably organic); one additional 400-series BCH or CHM full course (or equivalent).

# Chemistry and Geology (B.Sc.)

Specialist programme S05795

The Chemistry and Geology programme is intended for students with a strong chemistry background who wish to undertake graduate work in this area or who may be contemplating professional careers in the oil and mining industries. Sixteen courses are required in a programme of at least 20 courses. See Earth and Planetary Science.

# Chemistry (Physical) (B.Sc.)

Specialist programme \$20985

16 courses are required in a programme of at least 20 courses:

CHM150Y; MAT132Y/138Y; PHY140Y

CHM226Y, 230H, 240Y; MAT239Y; APM251Y; PHY231Y, CHM321Y, 330Y/340Y; APM311H, 351Y (CHM215H recommended)

 $1\frac{1}{2}$  400-series CHM courses, two of PHY352Y, 351H plus 354H, 435H plus 458H, any other 300Y- or 400Y- series CHM course.

NOTE: Choice of fourth-year courses must be approved by the Chemistry Department. The Physical Chemistry programme includes the study of more physics than the Chemistry Specialist programme and is intended for students interested in the more physical areas of chemistry.

### Classical Civilization (B.A.)

See Department of Classics

Major programme M03825

6 courses are required in a programme of at least 15 courses; including at least one at the 300-level:

One GRH full course or equivalent; one GLL full course or equivalent;

One full course or equivalent in ancient fine art (usually FAH101Y);

Three other full course equivalents in GRH; GLL; GRK; LAT; PHL200Y, HIS485Y, 486Y.

The programme is designed to meet the needs both of students seeking a broad survey of Greek and Roman culture and of specialists in other Humanities subjects who require background knowledge of Classics for their particular interests, whether literary, historical or philosophical.

### Classics

See also Greek and Roman History

### Commerce

Commerce and Finance (B.Com.) S22735

23 full courses required; specific subject requirements plus additional course requirements are summarized as follows:

7.0 Commerce

COM100Y, 220Y, 337Y and 4.0 additional full course equivalents in COM

7.0 Economics

ECO100Y, 200Y, 202Y; ECO203Y/221Y/322Y; ECO220Y/STA242Y;

ECO(311H and 366H)/(325H and 326H)/(364H and 365H)/COM325Y;

One additional full course equivalent in ECO

0.5 Computer Science

CSC139H

1.0 Mathematics

MAT132Y/138Y

3.0 Full course equivalents other than Commerce and Economics. At least one of these must be a humanities course.

4.5 Full course equivalents from any discipline including Commerce and Economics.

### NOTES:

- 1. Students must successfully complete at least four courses including COM100Y, ECO100Y and MAT132Y before they will be considered for formal entrance to the B.Com. programme, which begins with COM220Y. Since there is a limited number of spaces available in the programme, a minimum mark of 60 must be achieved in both COM100Y and ECO100Y and a minimum average in the two of 65. Students meeting these requirements are ranked by their cumulative grade point average and the highest ranked candidates are admitted to the B.Com. programme until all spaces are filled.
- 2. Students must complete the Programme section of the Registration Form during the Summer of the year in which they are accepted into the programme. The programme requirements in force at that time must be met in order to fulfill the degree requirements.
- 3. Students are advised to complete five courses in first year. It should be noted that six courses should be completed in each of the subsequent years.

- 4. Students must take at least two full courses at 200 or higher series level other than Commerce and Economics.
- 5. A cumulative G.P.A. of 1.50 or more must be obtained for all courses included in the student's programme and a grade of C or higher must be obtained in each of at least six full 300 or 400 series level courses.
- 6. A maximum of six 100 series level courses may be taken.

Major programme (B.A.) M11115

7 full courses are required in a programme of at least 15 courses as follows:

2.5 or 3 courses from

COM100Y/203H, ECO100Y, MAT132Y/138Y

4.5 or 4 courses from

COM204H, 331Y, 349H, WDW103Y, ECO220Y/STA242Y, CSC139H, POL322Y.

### NOTES:

- 1. Students must successfully complete at least four courses including MAT132Y and ECO100Y or COM100Y before they will be considered for formal entrance to the programme which begins with COM203H for students who did not complete COM100Y, or COM204H for students who completed COM100Y. A minimum mark of 60 must be obtained in ECO100Y or COM100Y. The cumulative GPA will be taken into consideration in admitting students to the programme.
- 2. Students must complete the Programme section of the Registration Form during the Summer of the year in which they are accepted into the programme. The programme requirements in force at that time must be met in order to fulfill the degree requirements.

### Communications

See Sociology

# Computer Science (B.Sc.)

Specialist programme \$16885

10 ½ courses are required in a programme of at least 20 courses:

CSC139H/149H, 158H; MAT138Y

CSC228H, 248H, 257H; MAT228H, 239Y

CSC348H, 351H, 356H; MAT334H/344H(G)/315H(G); STA242Y

Any two of CSC364H, 438H(G), 448H(G), 465H(G), 478H(G)

and any one of CSC441H(G), 446H(G), 451H(G),

and any two of CSC340H(G), 368H, 434H(G), 444H(G), 458H(G), 468H(G), 474H(G), 484H(G)

Recommended option: MAT104H

NOTE: Students are advised to arrange their programme so as to complete the requirements for the Major in Computer Science by the end of the third year.

### Major programme M16885

6<sup>1</sup>/<sub>2</sub> courses are required in a programme of at least 15 courses:

CSC139H/149H, 158H; MAT138Y,

CSC248H, 257H; MAT228H.

Six CSC half-courses from the following:

At least two of CSC228H, 356H, 368H, 340H(G), 434H(G), 444H(G), 458H(G), 468H(G), 474H(G), 484H(G)

At least two of CSC351H, 348H, 364H, 438H(G), 441H(G), 446H(G), 448H(G), 451H(G), 478H(G)

The additional two half-courses may be taken from any of the two categories above, or any of CSC218H(G), 300H(G), ECO206Y/208Y (which counts as two half-courses).

Minor programme R16885

3 courses are required:

CSC139H/149H, 158H, MAT132Y/138Y, and any two of CSC228H, 248H, 257H.

### Computer Science for Data Management (B.Sc.)

Specialist programme \$19225

13 courses are required in a programme of at least 20 courses: CSC139H/149H, 158H; COM100Y; ECO100Y; MAT132Y/138Y

CSC228H, 248H, 257H; ECO206Y/208Y; MAT234Y

CSC356H; COM220Y; MAT228H; STA242Y

Any two of CSC351H, 348H, 364H, 438H(G), 448H(G), 465H(G), 478H(G)

Any three of CSC340H(G), 368H, 434H(G), 444H(G), 458H(G), 468H(G), 474H(G), 484H(G) including at least one of CSC434H(G), 458H(G)

NOTE: Students should arrange their programme so as to complete the requirements for the major in Computer Science by the end of the third year.

### Drama (B.A.)

Major programme M21485

6 courses are required in a programme of a least 15 courses:

These courses must be chosen from the following groups:

Theatre History and Theory

DRM110Y

DRM120Y

Theatre Practice DRM200Y, 300Y

Dramatic Literature

ENG212Y, 235H, 254H, 332Y, 338Y

FRE254H, 354H, 423H

**GER 421Y** 

ITA272H

SLA367H

SPA348Y.

## Earth and Planetary Science

For Specialist Programmes See Geology Geology and Chemistry Geology and Physics

### Economics (B.A.)

Specialist programme\* \$14785

13 courses are required in a programme of 20 courses:

ECO100Y

MAT132Y/138Y

ECO206Y

ECO208Y

ECO220Y/STA242Y

ECO322Y

ECO325H and 326H

ECO327Y

ECO203Y/221Y/222Y

Four other ECO full courses (or equivalent) above the ECO200- level, including one ECO 400- level full course (or equivalent).

Major programme\* M14785

7 courses are required in a programme of 15 courses:

ECO100Y

MAT132Y/138Y

ECO200Y/206Y

ECO202Y/208Y

ECO220Y/STA242Y

Two other ECO full courses (or equivalent) at least one of which is at the 300 level.

Minor programme\* R14785

3 courses are required

ECO100Y

Two other ECO full courses (or equivalent).

Note: (\*) See below.

# Economics and Philosophy (B.A.)

Combined Specialist programme S11835

15 courses are required in a programme of at least 20 courses:

Economics\*

ECO100Y

MAT132Y/138Y

ECO200Y/206Y

ECO202Y/208Y

ECO220Y/STA242Y

ECO322Y

Two other ECO courses

Philosophy

7 PHL courses, 5 to be chosen from subject areas specified in Philosophy Specialist, including at least 2 at the 300- or 400-level.

The subject areas are:

History of Philosophy

Logic

Epistemology/Metaphysics

Ethics/Social and Political Individual Studies

Note: (\*) See below.

# Economics and Political Science (B.A.)

Combined Specialist programme S07515

8 Economics (and Mathematics) courses and 7 Political Science courses are required in a programme of at least 20 courses.

The following courses must be included in the programme:

Economics\*

ECONOMICS ECO100Y

MAT132Y/138Y

ECO200Y/206Y

ECO202Y/208Y

ECO220Y/STA242Y

ECO322Y

ECO203Y/221Y/222Y

One additional full course (or equivalent) in Economics

### Political Science

7 courses in Political Science, at least 5 from the 200- or higher series level:

One full course in Canadian Government

POL200Y

POL214Y

One full course (or the equivalent) from two of the following four fields:

Comparative Politics (Industrial Countries)

Comparative Politics (Developing Countries)

International Relations

Political Behaviour

Two additional full courses (or the equivalent) in Political Science.

\* The enrolment in most Economics courses above the ECO100- level (and, therefore, in all Economics Programmes) is restricted and may depend upon grade achievement levels. Students must carefully heed the information on course prerequisites in the calendar and consult the Department brochure (available from the Departmental Office at Erindale) for details.

# English (B.A.)

See also Modern Languages and Literatures

Specialist programme \$16455

At least 10 and not more than 15 full courses in English are required in a programme of at least 20 full courses.

The ten courses in a basic English programme should be selected according to the following distribution of courses:

- a). four courses before 1800, to be chosen from ENG200Y, 300Y, 312Y, 404Y, 206Y, 302Y, 304Y, 413Y, 212Y, 332Y, 306Y, 415Y, 322Y
- b). three courses after 1800, to be chosen from ENG207Y, 308Y, 346Y, 368Y, 417Y, 324Y, ENG250Y, 252Y, 254Y, 256Y, 317Y, 318Y, 319Y, 354Y, 357H, 451Y, 454Y, ENG328Y, 338Y, 348Y, 419Y
- c). one 400-series course, which may count as part of the categories (a) or (b), and
- d). any other two or three courses offered by the Department of English.

Major programme M16455

7 full course equivalents are required in a programme of at least 15 courses.

For this programme a student is required:

To select one full course from the first category below, at least one full course from any of the next four categories (pre-1800), at least one full course from any of the last two categories (post-1800), and any other four full ENG courses (including any listed below).

ENG108Y/112Y/140Y/165Y

ENG200Y/300Y/312Y/404Y

ENG206Y/302Y/304Y/413Y

ENG212Y/332Y

ENG306Y/322Y/415Y

ENG207Y/308Y/324Y/346Y/368Y/417Y

ENG328Y/338Y/348Y/419Y

NOTE: Students wishing to transfer from the Specialist to the Major programme in English and take a fifteen-course (3-year) degree may do so, provided they have fulfilled the requirements for the Major programme by the end of their Third year.

Students wishing to keep this transfer option open should plan to complete at least seven courses selected as specified by the Major Programme by the end of their Third year.

Minor programme R16455

3 full course equivalents in English, in a programme of at least 15 courses.

### English and History (B.A.)

Combined Specialist Programme: \$04775

14 full course equivalents in a programme of at least 20 courses.

To complete at least 6 and not more than 8 full course equivalents in English, at least one from any of the first four categories below (pre-1800), at least one from any of the last two categories below (post-1800), and any other four ENG full courses (including any listed below).

ENG200Y/300Y/312Y/404Y

ENG206Y/302Y/304Y/413Y

ENG212Y/332Y

ENG306Y/322Y/415Y

ENG207Y/308Y/324Y/346Y/368Y/417Y

ENG328Y/338Y/348Y/419Y

To complete at least 6 and not more than 8 courses in History, in at least two areas and including:

- a) one course before 1815
- b) two 300/400-level courses in British History
- two courses which correspond in area and period or in theme to two of the period or national literature courses in English.

Normally one course will be a senior essay (either ENG469Y or HIS497Y) in the Fourth Year of study on a topic chosen by the student and written under the supervision of the Department of English or History. Students in the programme are required to confirm their programme annually with the Faculty Advisor during the registration period.

# English and Philosophy (B.A.)

Specialist programme S25585

14 full course equivalents are required in a programme of at least 20 courses. At least 6 and not more than 8 full course equivalents in English, at least one from any of the first four categories below (pre-1800), at least one from any of the last two categories below (post-1800), and any other four ENG full courses (including any listed below).

ENG200Y/300Y/312Y/404Y ENG206Y/302Y/304Y/413Y

ENG212Y/332Y

ENG306Y/322Y/415Y

ENG207Y/308Y/324Y/346Y/368Y/417Y

ENG328Y/338Y/348Y/419Y

The equivalent of 6 or 7 full PHL courses, at least three of them above the 200-level.

# Fine Art (History of Art) (B.A.)

Specialist programme: S09085

11 courses are required in a programme of at least 20 courses.

At least 9 Art History courses (including core surveys FAH101Y, 102Y, 200Y, 210Y, 211H, plus at least 3 full courses at the 300- or 400- level) and two courses in a modern language or languages other than English. No more than a total of 13 FAH and FAS courses may be taken.

In designing a curriculum students are advised to note the prerequisites and corequisites of many FAH courses. The following progression of courses is strongly recommended:

First year: FAH101Y, 102Y, one language course

Second year: FAH200Y, other FAH200/300-level courses, one language course

Third year: FAH210Y, 211H and further courses chosen preferably from the FAH300- and 400-levels.

Fourth year: Further FAH courses chosen preferably from the FAH 300- and 400- levels.

### NOTES:

- 1. Courses in other departments, especially East-Asian Studies, Near Eastern Studies, Middle East and Islamic Studies, may be substituted for up to two full FAH courses with permission of the Undergraduate Secretary.
- 2. It is strongly recommended that students acquire a reading knowledge of at least one of French, German, or Italian by the end of second year.
- 3. With the permission of the Undergraduate Secretary, students may include up to the equivalent of two full courses from FAH202Y, 256H, 258H, 265H.
- 4. Though not required, one or more studio courses are recommended.
- 5. Course selections beyond the level of the core surveys should be made from at least two of the periods designated as Ancient, Mediaeval, Renaissance-Baroque, and Modern.

### Major programme: M09085

6 courses are required in a programme of at least 15 courses. 6 FAH courses of which at least 3 must be selected from the core surveys (see Specialist programme) and an additional 2 from the FAH 300- or 400-level courses

Up to one full course may be taken in other departments (see Specialist Note 1). No more than a combination of 10 FAH and FAS courses may be taken of which no more than a total of 8 FAH may be taken.

*Minor programme:* R09085 3 courses from the core surveys.

# Art and Art History (B.A.)

Specialist programme: \$07145

At least 7 full course equivalent FAS courses and 4 full course equivalent FAH courses are required in a programme of at least 20 courses. Two of the FAH courses must be from the core surveys (see Fine Art History - Specialist programme). No more than a combination of 15 FAS and FAH courses may be taken of which no more than 11 FAS courses may be taken.

The following courses comprise the FAS requirements.

FAS143H, 145H, 146H, 147H FAS232H\*, 245H, 246H, 248H

3 full courses (or their equivalents) from the 300- or 400- series must include 1 full course from the 400-

\*Note: FAS232H is open to first year students.

Major programme M07145

At least 4 full course equivalent FAS courses and at least 3 full course equivalent FAH courses are required in a programme of at least 15 courses.

The 3 FAH course must be from the core surveys (see Fine Art History - Specialist programme). No more than a combination of 10 FAS and FAH courses may be taken of which no more than 7 FAS courses may be taken.

The following course comprise the FAS requirements.

FAS143H, 145H, 146H, 147H

FAS232H\*, 245H, 246H, 248H

\*Note: FAS232H is open to first year students.

### French (B.A.)

See also Modern Languages and Literatures

Specialist programme S21565

10 courses are required in a programme of at least 20 courses:

1. FRE171Y, 271Y, 371Y.

2. FRE 140Y, which serves as a prerequisite for further literature courses.

- At least one full-course equivalent from among the following linguistic courses: FRE272Y, 375Y, 475Y or Independent Study or a Special Seminar in the area.
- 4. At least one full-course equivalent from among the following literature courses primarily devoted to texts prior to 1800: FRE220Y, 322Y or Independent Study or Special Seminar in the area.
- At least one full-course equivalent from among the following courses primarily devoted to texts after 1800: FRE224Y, 354Y, 364Y, 366Y, 423H, 424H or Independent Study or Special Seminar in the area.
- One full-course equivalent devoted to Québecois literature: FRE230Y or Independent Study or Special Seminar in the area.
- At least four of the ten courses must be from the 300/400 series, including at least one from the 400series other than FRE471Y.

NOTE: That in addition to the courses mentioned specifically above, FRE210H and 211H (Strasbourg and Aix only), FRE277Y and 471Y may be counted toward the Specialist Programme requirements. Only two courses from the rubric of Special Seminars or approved non-FRE courses may be counted toward Specialization.

The following may not be counted: FRE101Y, 121Y, 161Y, 202Y, 204Y, 261Y, 361Y.

Major programme M21565

7 courses are required in a programme of at least 15 courses:

1. FRE171Y, 271Y.

- 2. FRE140Y, which serves as a prerequisite for further literature courses.
- 3. At least one linguistic course (see Specialist Programme 3. above).
- 4. At least two courses in literature (see Specialist Programme 4., 5., and 6. above).
- 5. At least one of the seven courses must be from the 300/400 series.

See NOTE above at end of Specialist Programme.

Minor programme R21565

3 courses are required in a programme of at least 15 courses.

### Geography (B.A. or B.Sc., according to selection of courses)

Specialist programme S16665

9 full course equivalent GGR courses in a programme of at least 20 full courses, including:

- a) all of GGR202H, 207H, 212H, 276H, 280H, 300H, 381H, 491Y;
- b) any other 4<sup>1</sup>/<sub>2</sub> full course equivalents from GGR.\*

Major programme M16665

6 full course equivalent GGR courses in a programme of at least 15 full courses.

1 full course equivalent from GGR202H, 207H, 212H, 276H, 280H, 300H, 381H.

Any other 5 full course equivalents from GGR.\*

Environmental Management (B.A. or B.Sc., according to selection of courses)

Major programme M14255

6 courses are required in a programme of at least 15 full courses, including:

GGR233Y

JBG230Y

1 full course equivalent from GGR202H, 207H, 212H, 280H, 300H

1 full course equivalent from GGR205H, 206H, 307H, 312H, 374H, 377H

2 full course equivalents from GGR333H, 334H, 352H, 353H, 354H, 491Y.

Historical and Cultural Geography (B.A.)

Major programme M25525

6 courses are required in a programme of at least 15 full courses, including:

GGR131Y

1 full course equivalent from GGR245Y, 253Y, 255H, 364H

1 full course equivalent from GGR207H, 280H, 300H, 381H

3 full course equivalents from GGR344Y, 349H, 351Y, 353H, 361Y, 491Y

Physical Geography (B.Sc.)

Specialist programme S15785

12 courses are required in a programme of at least 20 full courses, including:

1 full course from GGR100Y, JBG230Y (GGR100Y recommended)

All of GGR202H, 207H, 212H, 276H, 280H, 300H, 381H, 491Y, MAT132Y (51/2 full course equivalents)

1<sup>1</sup>/<sub>2</sub> full course equivalents from GGR201H, 205H, 206H, 214H

2 full course equivalents from GGR301H, 302H, 303H, 304H, 307H, 312H, 377H, 379H

2 full course equivalents from BIO, CHM, EPS, PHY.

Major programme M15785

6 courses are required in a programme of at least 15 full courses, including:

1 full course from GGR100Y, JBG230Y (GGR100Y recommended)

1<sup>1</sup>/<sub>2</sub> full course equivalents from GGR202H, 207H, 212H, 276H, 280H, 300H, 381H

1<sup>1</sup>/<sub>2</sub> full course equivalents from GGR201H, 205H, 206H, 214H

2 full course equivalents from GGR301H, 302H, 303H, 304H, 307H, 312H, 374H, 377H, 379H

Urban and Economic Geography (B.A.)

Specialist programme S24215

9 full course equivalents are required in a programme of at least 20 full courses, including:

1 full course from GGR100Y, 131Y, 245Y, JBG230Y (GGR245Y recommended)

All of GGR202H, 212H, 220Y, 276H, 381H, 491Y (four full course equivalents)

1 half course from GGR207H, 280H, 300H

3½ full course equivalents from JGS340Y, GGR233Y, 253Y, 255Y, 324H, 325H, 330Y, 333H, 339H, 344Y, 346H, 349H, 352H, 354H, 357H, 361Y, 441H.

Major programme M24215

6 full course equivalents are required in a programme of at least 15 full courses, including:

1 full course from GGR100Y, 131Y, 245Y, JBG230Y, (GGR245Y recommended)

GGR220Y

1 full course equivalent from GGR202H, 207H, 212H, 276H, 280H, 300H

3 full course equivalents from GGR381H, 491Y and the last option group of the specialist programme.

Geology (B.Sc.)

Consult Department of Earth and Planetary Science

Specialist programme S05095

16 courses are required in a programme of at least 20 courses:

A minimum of 10 Geology courses (EPS/GLG) and 6 basic science courses are required. The basic science courses are defined as APM; BIO; BOT; CHM; CSC; MAT; PHY; STA; ZOO. The Geology specialist programme also requires participation in two field camps which are held following completion of the final examinations in the spring terms of the second and third years respectively.

The following courses are specifically required:

EPS120Y or equivalent; CHM118Y/150Y; MAT132Y/138Y; PHY118Y/140Y;

EPS200H/222H, 219H, 221H, 270H; one full course equivalent from:

MAT108H/214H/228H/233H/235Y/239Y/STA202H/212H/242Y:

EPS320H, 321H/337H, 322H, 332H, 345H/376H, 375H.

The basic science requirement can be completed by BIO100Y/200 or higher level courses in APM, BOT. CHM, CSC, MAT, PHY, STA, ZOO, (except MAT104H and St. George campus courses BOT200Y, 201Y, MAT220Y, PHY315H, ZOO200Y). Students are urged to include at least one half course in computer programming, such as CSC139H, in their programme.

The Geology course requirement consists of 4 full course equivalents in addition to the above, at least three of which must be at the 400-level. Note that certain GLG400-level courses have balloted

enrollment limits.

The following may be substituted for EPS/GLG300- and 400-level courses: GGR311H: PHY324H.

338Y, 422H, 423H, 443H; BIO354H.

Recommendations for more detailed course sequences, aimed toward specific careers within earth sciences, can be obtained from staff members. Such careers include: Petroleum Geology, Paleontology/Paleoecology, Geochemistry/Mineral Exploration, Geological survey, Global and Planetary Geology, Applied Geophysics. One such sequence is as outlined below:

Invertebrate Paleontology - Biostratigraphy Subfield (B.Sc.)

The invertebrate paleontology/biostratigraphy subfield stream is intended to be a programme guide for students preparing for graduate studies in invertebrate paleontology, biostratigraphy, or geo-environmental fields, or for undergraduates who are contemplating careers in the petroleum industry and who want a firm background in the fields of invertebrate paleontology, biology, and stratigraphic geology. The following course sequence is recommended:

CHM118Y, PHY118Y/140Y, MAT132Y/138Y, EPS120Y, BIO100Y, STA202H, 212H/GGR202H/BIO360H, BIO270Y/251Y, EPS200H/222H, 219H, 221H, 270H, 320H, 322H,

345H/376H, 375H, BIO351Y/354H/356H.

It is recommended that students take ENG100Y to fulfill their humanities requirement. EPS115H also is recommended in the first or second year to complete the background in historical geology. Students are very strongly urged to register in EPS470Y and to undertake a research project in some aspect of stratigraphy, biostratigraphy, or sedimentology/diagenesis. GGR280H/207H are also strongly recommended. In fourth year, GLG433H/434H should be taken, with GLG329H/322H in the third or fourth year. One additional fourth year geology course is required to fulfill the Geology degree requirements. Students should consult with Professor D. Kobluk (EPS) before undertaking this sequence of courses.

Geology and Chemistry (B.Sc.)

Consult Department of Earth and Planetary Science

Specialist programme S05795

16 courses are required in a programme of at least 20 courses; they include a minimum of 7 chemistry, 6 geology, 2 mathematics and 1 physics courses:

CHM150Y; EPS120Y, MAT132Y/138Y, PHY140Y;

CHM215H, 226Y, 230H; EPS200H/222H, 219H, 221H; MAT(214H/233H)/235Y/239Y;

CHM314Y/321Y/340Y, GLG331S, 400-level full-course equivalent in chemistry, a 300/400 full-course equivalent in geology.

Geology and Physics (B.Sc)

Consult Department of Earth and Planetary Science

Specialist programme \$16505

16 courses are required in a programme of at least 20 courses; they comprise:

1 Chemistry, 7 Mathematics/Physics and 8 Geology/Geophysics courses.

CHM118Y/150Y; MAT138Y; PHY140Y; EPS120Y

MAT214H, 239Y; PHY231Y; EPS200H/222H, 219H, 221H

Recommended course to be completed by the end of second year: CSC139H

APM311H; PHY351H, 354H; EPS236H, 322H, 332H, JGP334H, EPS337H, 338H,

One PHY400-series course in Geophysics and 2 ½ GLG/EPS courses at the 300- or 400- series level.

Recommended: PHY352Y

Note that the above programme leaves two course options during the first two years of study. Students are urged to use these options toward satisfying the Humanities and Social Sciences course requirements.

### German Language and Literature (B.A.)

Specialist programme S21355

10 courses are required in a programme of at least 20 courses:

First year: One of GER204Y/206Y or two of GER202Y/204Y/206Y.

Second year: Two of GER210Y, 220Y, 230Y; one of GER251Y/271Y/280Y/(a full course in German history).

Third and fourth years: GER326H; at least 21/2 courses, chosen from the following:

GER310Y/311Y, 312H, 410Y, 411Y, 415H, 416H, 490H; at least 3 courses, from GER321H, 322H, 323Y, 324Y, 325Y, 327H, 420Y, 421Y, 422Y, 425H, 490H, to make a total of 10 courses.

**NOTE:** Students must pass a test in oral fluency in German; this will normally be taken in the Third Year. GER271Y is recommended for specialization.

Students without Grade 13 German wishing to specialize in German should arrange their programme in consultation with the Department.

Major programme M21355

7 courses are required in a programme of at least 15 courses:

First Year: One of GER204Y/206Y or two of GER202Y/204Y/206Y.

Second Year: Two of GER210Y, 220Y, 230Y.

Third Year: GER326H; at least one course chosen from the following: GER310Y/311Y, 312H, 410Y, 411Y, 415H, 416H, 490H; at least 1½ courses from: GER321H, 322H, 323Y, 324Y, 325Y, 327H, 420Y, 421Y, 422Y, 425Y, 490H, to make a total of 7 courses.

NOTE: Students must pass a test in oral fluency in German; this will normally be taken in the Third Year. Students without Grade 13 German wishing to major in German should arrange their programme in consultation with the Department.

Minor programme R21355

Any three sequential and/or coherent courses in German language or literature, as accepted by the department.

### German

See also Modern Languages and Literature

### Greek and Roman History (B.A)

Consult the Department of Classics

Major programme (with language requirement): M21115

7 courses are required in a programme of at least 15 courses:

3 GRH courses numbered 200 or above (except GRH221H, 223H, 309Y, 312Y, 324H)

4 courses in GRK and LAT, at least one in each language numbered 210 and above

Major programme (without language requirement): M21115

6 courses are required in a programme of at least 15 courses:

6 courses in GRH, at least two of which must be 300-series

One course may be replaced by a comparable course in FAH/HIS/NES approved by the Department

# Minor programme R21115

Any three GRH courses approved by the Department

# History (B.A.)

Specialist programme S06525

9 courses or their equivalent are required in a programme of at least 20 courses:

Students wishing to substitute history courses from other Departments for HIS courses should consult the Discipline Representative. Courses in ancient Greek and Roman History are offered, for example, by the Classics Department. See under GRH.

The nine courses are to be chosen from a minimum of three areas of study (e.g. European, Russian and East European, Medieval, Canadian, American, Latin-American, British).

In each of two areas a minimum of two 300/400 level courses must be chosen.

Of the nine courses at least two must deal with time periods preceding 1815. (Consult the Erindale History Handbook for listings of pre-1815 courses.)

Major programme M06525

5 courses are required in a programme of at least 15 courses:

Students wishing to substitute history courses from other Departments for HIS courses should consult the Discipline Representative. Courses in ancient Greek and Roman History are offered, for example, by the Classics Department. See under GRH.

The five courses must be chosen from a minimum of two areas of study (e.g. European, Russian and East European, Medieval, Canadian, American, Latin American, British).

Of the five courses at least two must be at the 300/400 series level.

Of the five courses at least one must deal with a time period preceding 1815. (Consult the Erindale History Handbook for listings of the pre-1815 courses.)

Italian (B.A.)

See also Modern Languages and Literature

Specialist programme S25245

10 full courses are required in a programme of at least 20 courses:

Two courses or equivalent from ITA100Y, 115Y, 200Y, 210Y, 340Y, 450Y.

ITA321Y, 436Y (or equivalent)

One full course or equivalent from ITA324Y, 326H, 427H.

One full course or equivalent from ITA325H, 390Y, 395Y.

Four other courses in ITA selected from the ones listed above and in the calendar.

Major programme M25245

7 courses are required in a programme of at least 15 courses:

Two courses from ITA100Y, 115Y, 200Y, 210Y, 340Y.

ITA321Y.

Any other 4 full courses or equivalent in ITA selected from the ones listed above and in the calendar.

Minor programme R25245

3 ITA courses are required in a programme of at least 15 courses:

Possible combinations:

Three courses or equivalent from the following, all given in English: ITA240Y, 270H and 272H, 275Y, 330Y.

or

Three consecutive language courses

or

Three courses or equivalent selected in consultation with and approved by the Italian Department.

NOTE: Students intending to pursue graduate studies in Italian at the School of Graduate Studies in Toronto should take four full courses or equivalent covering the four main periods of Italian literature (i.e., Middle Ages, the Renaissance, the 17th and 18th centuries, the modern period) and must obtain an overall average of at least 75% in their last two years of study.

### Mathematical Sciences (B.Sc.)

Specialist programme S25115

10 courses are required in a programme of at least 20 courses.

CSC139/149H, 158H, MAT104H, 108H, 138Y

APM251Y, CSC248H, MAT228H, 239Y, STA242Y

CSC348H/MAT349H, MAT334H, one of:

APM351Y/(311H, 336H)

CSC(228H, 257H)

MAT(338H, one other half-course at the 300-level or 400-level)

STA(302H, 402H)/(312H, 412H)

Plus one full course equivalent in APM, MAT, CSC or STA (excluding MAT105Y).

Major programme M25115

6 courses are required in a programme of at least 15 courses.

MAT108H, 138Y

APM251Y, MAT228H, 239Y

CSC348H/MAT349H, MAT334H, and one 300/400 series full course in APM, CSC, MAT, or STA

Minor programme R25115

MAT108H, 132Y/138Y, one and one-half other courses in APM or MAT (excluding MAT105Y). MAT228H may be substituted for MAT108H.

### Modern Languages and Literatures (B.A)

(Given by the Language Departments of the Faculty)

The Modern Languages and Literatures programme is in effect a number of sub-programmes, any two of which may be undertaken concurrently. Upon graduation, a student may be certified as having completed a combined Specialist Programme in the two languages chosen.

14 courses are required in a programme of at least 20 courses, seven in each subject.

The requirements in each subject are as follows:

# **Programme Codes**

rrogramme Coues			
English and French	S25615	French and Spanish	S20725
English and German	S01575	German and Italian	S15025
English and Italian	S13935	German and Russian	S03235
English and Russian	S03165	German and Spanish	S21925
English and Spanish	S18025	Italian and Russian	S17835
French and German	S23145	Italian and Spanish	S18785
French and Italian	S08155	Russian and Spanish	S19985
French and Russian	S07345	•	

### **English**

For this programme a student is required to complete 7 full course equivalents in English, in a programme of at least 20 courses.

To select at least one full course from any of the first four categories below (pre-1800), at least one full course from the last two categories (post-1800), and any other four full course equivalents in ENG courses (including any listed below).

ENG200Y/300Y/312Y/404Y

ENG206Y/302Y/304Y/413Y

ENG212Y/332Y

ENG306Y/322Y/415Y

ENG207Y/308Y/324Y/346Y/368Y/417Y

ENG328Y/338Y/348Y/419Y

### French

FRE140Y, 171Y, 271Y, 371Y

At least one course from Group 3 of the programme in French Language and Literature

At least one course from Group 4

At least one course from Groups 5 or 6

(At least three of the seven FRE courses must be from the 300/400 series)

### German

First Year: One of GER204Y/206Y or two of GER202Y/204Y/206Y.

Second Year: Two of GER210Y, 220Y, 230Y.

Third and Fourth Years: GER326H; at least one course from GER310Y/311Y, 312H, 410Y, 413Y, 415H, 416H, 490H; at least 1½ courses chosen from the following: GER321H, 322H, 323Y, 324Y, 325Y, 327Y, 420Y, 421Y, 422Y, 425Y, 490H, to make a total of 7 courses.

NOTE: Students must pass a test in oral fluency in German; this will normally be taken in the Third Year.

Students without Grade 13 German wishing to co-specialize in German should arrange their programme in consultation with the Department.

### Italian

First year: One of the following courses:

ITA100Y/115Y/200Y/210Y

Second year: Two of the following courses: ITA 200Y/210Y/340; ITA230Y, 371Y, 390Y

Third and fourth years: Four of the following courses:

ITA340Y/450Y; ITA321Y, 324Y, 325H, 371Y, 390Y, 395H, 436Y.

Note: No course may be counted twice.

### Russian

SLA100Y, 210Y, 220Y, 310Y, 320Y and two courses from: SLA110Y, 314H, 317H, 318H, 319H, 363H, 367H.

### Spanish

First year: SPA100Y/220Y

Second year: SPA220Y/320Y plus one full 200- series course (excluding SPA293H) if not taken in First

Year

Third and fourth years: SPA320Y, 350Y, 420Y, 425H; plus courses from the 300/400 series (including a half course in Spanish American literature) to make the equivalent of four full courses.

# Philosophy (B.A.)

Specialist programme S02315

The equivalent of 9 full courses in Philosophy is required in a programme of at least 20 courses, with at least half of the Philosophy courses above the 200 level. A student's programme must be worked out with the appropriate staff Specialist Coordinator. This programme will normally be established by the end of the student's second year, and confirmed at registration in subsequent years. While taking account of the student's personal interests and aims, the programme will normally include at least the stated number of courses in the following:

### 2 History of Philosophy

1/2 Logic

1 Epistemology/Metaphysics

1 Ethics/Social and Political

1/2 Individual Studies

Major programme M02315

The equivalent of 6 full Philosophy courses is required in a programme of at least 15 courses, with at least two of the Philosophy courses above the 200-level.

Combined Specialist programme

Economics; English; Philosophy and History (S02075); Philosophy and Linguistics (S10575); Philosophy and Political Science (S17465); Philosophy and Religious Studies.

Minor programme R02315

The equivalent of 3 full Philosophy courses is required in a programme of at least 15 courses.

To complete a "Minor Programme in Philosophy", students should consult the Department of Philosophy for details.

### Philosophy and Economics

See Economics and Philosophy

### Philosophy and Religious Studies

See Religious Studies and Philosophy

### **Physical Chemistry**

See Chemistry (Physical)

# Physics (B.Sc.)

Specialist programme S19445

14 courses required in a programme of at least 20 courses:

PHY140Y; MAT138Y

PHY224H, 231Y, 254H, 256H; MAT239Y, 214H/APM251Y

PHY325Y, 340Y, 352Y, 351H, 354H; APM311H/351Y, MAT334H

Three of PHY470Y/471Y/(400-level full course equivalents on the St. George campus)

Major programme M19445

7 courses required in a programme of at least 15 courses:

PHY118Y/140Y; MAT132Y/138Y

PHY210Y/(224H, 254H), 231Y, 256H; MAT235Y/239Y

PHY326H/340Y; APM311H; MAT334H/319H(G)

NOTE: PHY210Y/254H may be taken in year 2 or 3 in major programme.

### Political Science (B.A.)

Specialist programme S20155

10 courses are required, at least 8 at the 200- or higher series level in a programme of 20 courses:

One full course in Canadian Government.

At least two of: POL200Y, 320Y, 329Y

One full course (or the equivalent) from each of three of the following four fields:

Comparative Politics (Industrial Countries)

Comparative Politics (Developing Countries)

International Relations

Political Behaviour

Four additional full courses in Political Science

Recommended: ECO100Y

Major programme M20155

7 courses in Political Science, at least 5 at the 200-or higher series level in a programme of 15 courses:

One full course in Canadian Government

POL200Y

One full course (or the equivalent) from each of two of the four fields listed in the Specialist programme. Three additional full courses in Political Science

Minor programme R20155

3 courses in Political Science, at least 2 at the 200- or higher levels:

One course in Canadian Government

POL200Y

One other full course in Political Science

### Political Science and Economics

See Economics and Political Science

# Psychology (B.Sc.)

Specialist programme \$11605

10 full courses in Psychology or their equivalent are required in a programme of at least 20 courses. All candidates for specialization must take PSY100Y, 201H, and 202H, as well as one course from each category as listed in I.2. In addition, the remaining eight full courses in Psychology must satisfy the distribution requirements listed below in section II.3 and III.1 and the laboratory requirement in section III.2. The student interested in specializing in Psychology should take into account these distribution requirements as well as course prerequisites in planning his remaining eight courses. It should be noted that a single course may not be used to satisfy more than one distribution requirement.

I.1) PSY100Y

- 2) One of ANT100Y/BIO100Y/SOC101Y/PHL100Y/MAT124H/132Y/104H
- II.1) PSY201H, 202H
  - 2) Strongly recommended: PSY203H
    - One course, full or half, from each category:
      - a) Biological Bases of Behaviour. PSY252H/290Y
      - b) Developmental and Social Processes. PSY210Y/220Y/230H
      - c) Cognitive Processes. PSY260H/270Y/280Y
- III.1) One course, full or half, from each category:
  - a) Biological Bases of Behaviour. PSY354H/390H/392H/393H/394H/JPB359Y
  - b) Developmental and Social Processes. PSY311H/314H/315H/316H/317H/320H/321H/323H/324H/332H/340Y/341H /410H/420H/440H
  - c) Cognitive Processes. PSY314H/315H/373H/374H/375H/376H/393H/480H

2) One laboratory course. PSY319H/329H/379H/389H/399H/JPB359Y

S) Sufficient additional courses in Psychology to meet the requirement of 10 full courses in Psychology. At least five must be at a level of 300 or 400.

Courses at 300 and 400 level which satisfy the requirements of III.1 and III.2 can count toward the requirement of at least five full courses at level 300 and 400. Psychology courses which meet the requirements in I and II can be counted toward the total requirement of 10 full courses in Psychology.

Requirements of II.1 and II.3 are recommended in second year. Candidates for the specialist programme should meet with their faculty advisor and have their programme approved.

Major programme M11605

6 full courses or the equivalent number of half courses are required for a major in psychology. PSY100Y must be one of these six courses. Students must satisfy section II.3 of the specialist programme. Courses which satisfy section II.3 can be counted toward the requirement of six full courses. At least two of these six courses must be at level 300.

# Religious Studies (B.A.)

Specialist programme S01515

9 courses in a 20-course programme that requires a balance of breadth and depth (see note 1 below). Each student's programme is to be designed to fulfill the requirements of a Major Programme on completion of 15 courses.

2 of the 9 courses can be cross-listed from another department or college programme. At least 4 full-course-equivalents must be at the 300 or 400 level; of which one must be at the 400 level.

Areas of concentration include: Comparative Study of World Religions, Christian Studies, Asian Religions, Psychology of Religion, Religion and Culture, Religious Ethics, or any coherent programme approved by the Department

Major programme M01515

5 courses are required in a programme of at least 15 courses.

One of these courses must fulfill the Department's breadth requirements (see note 1 below).

1 of 5 courses can be cross-listed from another department or college programme. At least 2 full-course-equivalents must be at the 300 or 400 level.

Minor programme R01515

Any combination of REL courses totalling 3 full-course-equivalents.

# Religious Studies and Philosophy (B.A.)

Combined Specialist programme \$09825

14 courses are required in a 20-course programme. Each student's programme is to be designed to fulfill the requirements of a Major Programme in Religious Studies or Philosophy on completion of 15 courses.

NOTE 1. Breadth is achieved through study of both Eastern and Western religious traditions (at least one full-course equivalent). Attention should also be paid to different approaches to the study of religion (historical, philosophical, social scientific).

Depth is achieved by pursuing advanced knowledge of a particular tradition or method.

NOTE 2. Students pursuing Specialist, Combined Specialist or Major Programmes must fulfill not only the departmental or college programme requirements, but also the general degree requirements listed at the front of the calendar.

Students pursuing programmes in Religious Studies should consult a faculty advisor annually and submit their course selections to the Department for approval.

Erindale College provides Specialist, Major and Minor programmes in Religious Studies. For the completion of certain programmes it may be necessary to supplement the Erindale course offerings with selected courses on the St. George Campus.

Russian Language and Literature (B.A.)

Consult Department of Slavic Languages and Literature

Specialist programme S04945

9 SLA courses are required in a programme of at least 20 courses:

SLA100Y, 210Y, 220Y, 310Y, 320Y.

Two courses from SLA110Y, 314H, 317H, 318H, 319H, 363H, 367H.

NOTE: Students who have taken Grade 13 Russian are admitted to SLA220Y.

Major programme M04945

6 SLA courses are required in a programme of at least 15 courses.

SLA100Y, 220Y, 320Y and 3 courses from the option group in the specialist programme.

Minor programme in Russian Language R04945

SLA100Y, 220Y, 320Y.

Russian Literature in Translation (B.A.)

Consult Department of Slavic Languages and Literature

Major programme M12815

6 courses are required in a programme of at least 15 courses:

SLA211Y and five courses from the option group in the specialist programme.

Minor programme R12815

3 courses approved by the Department.

# Slavic Languages and Literature (B.A.)

Specialist Programme: S01985

Consult Department of Slavic Languages and Literatures

### Sociology (B.A)

Specialist programme \$10135

9 SOC courses are required in a programme of at least 20 courses:

SOC101Y

200Y/201Y - Strongly recommended to be taken during the second year.

SOC203Y/313Y

At least three SOC courses in one of the five subspecialty areas, with at least one of the three from the 300/400 series.

The subspecialty areas are:

Theory and Methods: SOC200Y, 201Y, 203Y, 313Y, 321H, 322H, 410H, 411H.

Societies: SOC220Y, 304Y, 312Y, 324Y, 422H, 423H.

Interaction: SOC202Y, 214Y, 215Y, 245Y, 308H, 309Y, 315Y, 316Y, 329H, 420H, 421H.

Inequality: SOC212Y, 301Y, 303H, 306Y, 330H.

Urban Life: SOC205Y, 206Y, 207Y, 305Y, 311Y, 325Y, 327Y, 328H, 329H, JGS340Y, SOC346Y, 422H, 423H.

At least two SOC300/400 series courses, at least one of which must be a "Selected Topics" seminar from the 400 series.

Major programme M10135

6 SOC courses are required in a programme of at least 15 courses:

SOC101Y

200Y/201Y - Strongly recommended to be taken during the second year.

SOC203Y/313Y

At least two SOC courses in one of the five subspecialty areas listed under the Specialist Programme.

Major programme (Communications) M22685

6 courses are required in a programme of at least 15 courses:

SOC101Y,

SOC152Y

SOC200Y/201Y

SOC203Y/313Y

Two of the following: SOC280Y, 284Y, 309Y, 332Y, 334Y

Minorprogramme R10135

3 courses are required in a programme of at least 15 courses:

SOC101Y and any two other SOC courses.

NOTES: For SOC201Y, ECO220Y/GGR202H,212H/STA202H,212H/PSY201H, 202H will be regarded as equivalent.

SOC101Y is a prerequisite for all other SOC courses. Instructors in subsequent courses will assume that the student has the background knowledge provided by the course's prerequisites.

Spanish (B.A.)

See also Modern Languages and Literatures

Specialist Programme S06235

9 SPA courses are required in a programme of at least 20 courses:

2 full courses or equivalent are required in addition to the programmes listed below. Students must include SPA425H in their programme

Combined Specialist programme:

7 courses are required in a programme of at least 20 courses

- ) For students beginning Spanish:
  - 1. SPA100Y, 220Y, 320Y, 420Y
  - 2. Two full SPA courses or equivalent in literature, linguistics, or civilization, one of which must be at the 300- or 400- level
  - 3. SPA350Y (SPA425H recommended)
- b) For matriculants:
  - 1. SPA220Y, 320Y, 420Y
  - 2. One full SPA course or equivalent at the 200-level
  - 3. 1.5 SPA courses in literature at the 300- or 400-level
  - 4. SPA350Y
  - 5. SPA425H
- c) 7 SPA courses for Native Speakers of Spanish:
  - 1. SPA320Y, 420Y
  - SPA350Y
  - 3. SPA425H
  - 4. 3.5 courses in literature, linguistics or civilization, at least 2 at the 300- or 400- level.

Major programme M06235

5 SPA courses are required in a programme of at least 15 courses.

- 1. SPA100Y or equivalent
- 2. SPA220Y or equivalent
- 3. SPA320Y or equivalent
- 4. One additional SPA full course or equivalent at the 300-level
- 5. One additional SPA full course or equivalent in language, literature or civilization

Minor programme R06235

Any three courses approved by the Discipline.

# Statistics, Applied (B.Sc.)

Specialist programme \$15405

Nine courses are required in a programme of at least 20 courses:

MAT132Y/138Y; CSC139H/149H; (STA202H recommended)

STA242Y; MAT228H, 234Y/235Y/239Y; CSC158H

STA302H, 312H, 322H(G), 347H, 402H, 412H, 437H(G), 432H/452H(G)/457H(G)/462H(G); CSC248H/257H/35IH.

Major programme M15405

Six courses are required in a programme of at least 15 courses:

MAT132Y/138Y;

CSC139H/149H; (STA202H recommended)

STA242Y; MAT234Y/235Y/239Y; CSC158H; (MAT228H recommended)

(STA302H and STA402H)/(STA312H and STA412H);

Equivalent of 1 full course from STA302H, 312H, 322H(G), 347H, 402H, 412H, 432H, 437H(G), 457H(G).

Minor programme R15405

MAT132Y/138Y, STA242Y

I full STA course from numbered 300-level or higher.

Survey Science (B.Sc.)

Specialist programme S08775

13.5 courses in a programme of at least 20 courses:

MAT138Y/132Y

PHY140Y/118Y

EPS120Y/GGR100Y

CSC139H/149H

ECO100Y

STA242Y

INE203H/205H (ENG100Y alternative for a full credit)

SUR201H and SUR202H

SUR230Y

SUR210H

SUR250H

SUR311H and SUR312H

SUR321H and SUR322H

SUR335H and SUR336H

SUR405H

SUR458H

SUR495H

Major programme M08775

6.5 courses in a programme of at least 15 courses:

MAT138Y/132Y

PHY140Y/118Y

STA242Y

SUR201H and SUR202H

SUR210H

SUR230Y, and any two of

SUR311H, 312H, 321H, 322H, 335H, 336H, subject to prerequisites.

# **Erindale Approved Areas of Study**

The following constitute Specialist or Major programmes in "Approved Areas of Study".

# Canadian Studies (B.A.)

Faculty Coordinator: Professor J. Dutka

"The most valid and compelling argument for Canadian Studies is the importance of self-knowledge, the need to know and to understand ourselves."

The Canadian Studies Programme at Erindale offers both a Specialist and a major concentration drawn from courses in Anthropology, Commerce, Economics, English, Fine Art, French, Geography, History, Philosophy, Political Science and Sociology. Interdisciplinary in nature, the programme is nonetheless designed so that students can fulfill entrance requirements of the Faculty of Education or the School of Graduate Studies by a careful selection of courses in other areas. Students wishing to complete a specialist or major certification in Canadian Studies must notify and register with the Faculty Advisor.

# Specialist Programme S07285

Eleven courses are required in a 20 credit degree programme:

- a) In the first and second years:
  - 1) HIS262Y (History of Canada)
  - 2) POL100Y (Introduction to Canadian Politics)
  - 3) ENG252Y (Canadian Literature in English)
  - FRE161Y/FRE171Y (or, if an exemption is granted, a course in French Canadian literature in the original language)

b) In the third and fourth years:

5) GGR245Y (Urban Canada) or SOC220Y (Canadian Society)

6) INE401Y (a major research paper)

7) INE402Y (Interdisciplinary Seminar in Canadian Studies)

8-11) Four courses with a disciplinary, thematic or chronological coherence chosen, with the approval of the coordinator of the programme, from the list of approved courses offered on either the Erindale or the St. George Campuses.

Major Programme M07285

Seven courses are required in a 15 credit degree programme:

1) HIS262Y (Canada, 1663-1970)

2) POL 100Y (Introduction to Canadian Politics)

3) ENG252Y (Canadian Literature in English)

4) FRE161Y/FRE171Y (or, if exemption is granted, a course in French Canadian Literature in the original language)

5) GGR245Y (Urban Canada) or SOC220Y (Canadian Society)

6-7) Two courses chosen from those approved for the Specialist Programme, both of which must be at the 300-400 level.

For course descriptions of INE401Y and INE402Y, see under Interdisciplinary Studies.

Students may also be interested in the major programme in Literatures and Languages in Canada, administered through New College, but open to Erindale students. For further information, consult the Faculty Advisor.

# Crime and Deviance (B.A.)

Faculty Coordinator: Departmental Advisor (Sociology)

This approved area of study is designed to provide a broad foundation for students who may have a vocational, academic and/or civic interest in issues of crime and its control.

This might include:

(a) students who at a later stage may seek careers in the criminal justice system (e.g. police, probation and prison work); (b) students who at a later stage may wish to pursue more advanced work in areas related to, for

example, criminology or social work;

(c) students wanting to know more about the topics of the sociology of crime, particularly as these become issues of public policy.

Major Programme M07275

A minimum of 7 full course equivalents in a 15-credit degree programme.

Five full course equivalents are required (including 2 prerequisite full course equivalents).

SOC101Y Introduction to Sociology

PSY100Y Introductory Psychology

SOC212Y Deviance and Control

SOC306Y Sociology of Crime and Delinquency

SOC303H Careers in Crime and Delinquency

PSY324H Aggression

Optional Courses: Two full course equivalents to be selected from the following:

PHL284H Contemporary Moral Issues

PHL370H Issues in the Philosophy of Law

PSY220Y Introduction to Social Psychology

PSY230H Introduction to Personality

PSY260H Introduction to Learning

PSY340Y Abnormal Psychology

SOC324Y Politics and Society SOC301Y Social Inequality

SOC346Y Society, Organization and the Individual

Earth Resources (B.Sc.)

Faculty Coordinators: Professor S. Luk (Geography)

Professor G.W. Pearce (Earth & Planetary Science)

This programme is designed:

(1) to acquaint students with problems related to the physical resources of the earth and to the use of these resources by man; and

(2) to develop pertinent skills used in government resource agencies, consulting firms, and resource

industries.

Specialist Programme S01125

A minimum of twelve courses are required in a 20 credit programme including:

(a) all of:

CHM118Y General Chemistry

EPS120Y Introduction to Earth and Planetary Science GGR100Y Introduction to Physical Geography

MAT132Y Calculus

PHY118Y/140Y World of Physics/Principles of Physics

EPS219H Mineralogy

EPS200H/222H Introduction to Rock Identification

EPS221H Optical Mineralogy

(b) 1<sup>1</sup>/<sub>2</sub> full course equivalents from:

GGR201H Geomorphology: The Science of Landforms
GGR205H Principles of Soil Geography
GGR206H Introduction to Hydrology
GGR207H Aerial Photo Interpretation

GGR214H Climatology

(c)  $1\frac{1}{2}$  full course equivalents from:

EPS270H Paleontology for Geologists

EPS320H Petrology

EPS322H Structural Geology I EPS375H Carbonate Rocks EPS345H/376H Clastic Rocks

(d) 1<sup>1</sup>/<sub>2</sub> full course equivalents from:

GGR301H Environmental Geomorphology
GGR302H Fluvial Geomorphology
GGR307H Soil Management
GGR312H Permafrost Environment

GGR374H Water Quality

(e) 1 full course equivalent from:

GGR233Y Energy, Natural Resources and Environmental Management GGR333H Geography of Energy in Canada

GGR334H Geography of Energy in Canada
Water Resources Management

Supplementary Course Sequence: It is strongly recommended that students also take some courses from one of the following groups:

(1) Biophysical Resources

BIO100Y The Study of Life
BIO230H Ecology I
BIO231H Ecology II
BIO332Y Freshwater Biolog

BIO332Y Freshwater Biology BIO435H Biogeography

(2) Resource Assessment Techniques

GGR202H Statistics

GGR212H Applications of Statistics

GGR276H Introduction to Data Processing in Geography

GGR280H Cartography

GGR377H Environmental Monitoring

(3) Resource Utilization and Development

ECO100Y Introduction to Economics ECO200Y Microeconomic Theory

ECO220Y Quantitative Methods in Economics
ECO314H Energy and Resource Economics
ECO371H The Economics of Natural Resources
GGR352H Resources and Economic Development
GGR354H Applied Problems in Resource Development

### Major Programme M01125

A minimum of 7 courses are required in a 15-credit programme, including:

(a) all of:

EPS120Y Introduction to Earth and Planetary Science

GGR100Y Introduction to Physical Geography

EPS219H Mineralogy

EPS200H/222H Introduction to Rock Identification

(b) 1 ½ full course equivalents from:

GGR201H Geomorphology: The Science of Landforms

GGR205H Principles of Soil Geography
GGR206H Introduction to Hydrology
GGR207H Aerial Photo Interpretation

GGR214H Climatology

(c)  $1^{1/2}$  full course equivalents from:

GGR301H Environmental Geomorphology

GGR302H Fluvial Geomorphology
GGR307H Soil Management
GGR312H Permafrost Environment
GGR374H Water Ouality

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(d) 1 full course equivalent from:

GGR233Y Energy, Natural Resources, and Environmental Management

GGR333H Geography of Energy in Canada GGR334H Water Resources Management

Supplementary Course Sequence: It is strongly recommended that students also take some courses from one of the following groups:

(1) Biophysical Resources

(2) Resource Assessment Techniques

(3) Resource Utilization and Development

See Specialization Requirements or

(4) Geological Resources, (CHM118Y etc. listed below)

(4) Geological Resources

CHM118Y General Chemistry

MAT132Y Calculus

EPS221H Optical Mineralogy

EPS270H Paleontology for Geologists

EPS320H Petrology

EPS375H Carbonate Rocks
EPS345H/376H Clastic Rocks

# Exceptionality in Human Learning (B.A. or B.Sc., still to be determined)

Faculty Coordinator: Professor C. Corter

This approved area of study is designed to provide a broad foundation for students who may have a vocational, academic, and/or civic interest in issues concerning exceptional children and adults, both the gifted and the handicapped.

These students might include:

- (a) those who at a later stage may wish to pursue more advanced work in special education, mental rehabilitation programmes, group home management, adult retraining, mental hospital schools, etc.
- (b) those who at a later stage may wish to pursue more advanced work in areas related to retardation, abnormal development, or related fields.
- (c) those wanting to know more about the psychology and sociology of exceptional individuals, particularly as these become issues of public policy.

# Specialist Programme \$14405

13 full course equivalents in a 20 credit degree programme

8 1/2 courses are required:

PSY100Y Introductory Psychology

PSY210Y Introduction to Development

PSY340Y Abnormal Psychology OR PSY330H Psychometrics and PSY331H Psychological Tests

PSY341H Psychopathologies of Childhood

PSY342Y Practicum in Exceptionality in Human Learning

SOC101Y Introduction to Sociology

SOC152Y Introduction to Communication Theory and Research

SOC215Y Socialization

SOC334Y Communication and Children

4 <sup>1</sup>/<sub>2</sub> full course equivalents to be selected from the following, no more than two from any one discipline; at least one full course equivalent (but not more than two) must be selected from the group DRM - LIN. Students may wish to supplement this programme by choosing additional courses from among those listed below.

PSY201H Research Design and Analysis in Psychology I

PSY202H Research Design and Analysis in Psychology II PSY270Y Introduction to Cognitive Psychology

PSY311H Social Development

PSY314H Perceptual Development PSY315H Cognitive Development

PSY319H Developmental Psychology Laboratory

PSY330H Psychometrics

PSY331H Psychological Tests

PSY340Y Abnormal Psychology

PSY373H Human Memory and Learning PSY374H Introductory Psycholinguistics

SOC201Y Social Statistics or SOC200Y Social Research Methods

SOC214Y Sociology of the Family

SOC245Y The Sociology of Aging

SOC311Y Sociology of Education SOC332Y Small-Group Communication

SOC332Y Small-Group Communi
DRM200Y Acting I

ENG100Y English Composition or INE203H Effective Writing

ENG259H Children's Literature

FAS143H Drawing I FAS146H Design I

INE303Y Writing and Teaching

LIN100Y Introduction to General Linguistics

Major Programme M14405

7 full courses are required in a 15 credit programme:

PSY100Y Introductory Psychology PSY210Y Introduction to Developm

Introduction to Development

PSY342Y Practicum in Exceptionality in Human Learning

SOC101Y Introduction to Sociology

SOC152Y Introduction to Communication Theory and Research

SOC215Y Socialization

SOC334Y Communication and Children

Students may wish to supplement this programme by choosing additional courses from among those required or suggested for the Specialist Programme.

# Latin American Studies (B.A.)

Faculty Coordinator: Professor E. Neglia (Spanish)

Major Programme M05525

A minimum of 7 full course equivalents in a 15-credit degree programme.

Seven full course equivalents (for students with Grade 13 Spanish)

Eight full course equivalents (without Grade 13 Spanish)

\*SPA220Y Composition and Oral Practice II (Prerequisite: SPA100Y/Grade 13 Spanish)

SPA280Y Latin American Civilization and Culture (in English)

SPA320Y Composition and Oral Practice III (Prerequisite: SPA220Y)

HIS290Y Introduction to Latin American History
HIS389Y Social Revolutions in Latin America

ANT210Y Anthropology of Art

INE390Y Independent Study

# Supplementary courses:

The programme may be supplemented with one or more of the following courses:

HIS391H Mexico - Independence to Revolution, 1810-1960

SPA366H Modern Spanish American Poetry

SPA382H Modern Spanish American Novel

SPA385H Spanish American Short Stories

\*NOTE: Native speakers of Spanish are required to substitute the equivalent of one full course at the 300-level in Spanish American literature for SPA220Y.

# Material Culture (B.A.)

Faculty Coordinators: Professor T.F. McIlwraith (Geography)

Professor I. Lancashire (English)

This programme is built around a number of Erindale courses dealing with the artifacts created by human societies. Buildings, tools, field systems, machines, and books are evidence of the breadth of man's material contributions to culture whether these objects are prehistoric or modern, urban or rural, vernacular or high art, preindustrial or computer-age. These courses study artifacts from many perspectives. Field studies in museums, galleries, factories, archives, and less formally in the out-ofdoors itself are a component of many of these courses. There are some insights into conservation, preservation, restoration, and museum work.

# Major Programme M15755

Students may enter the programme without specific prerequisite courses, beginning in their second year (i.e. with 4 or more full course equivalents). Introductory courses such as ANT100Y, FAH101Y, FAH102Y, GGR131Y, SOC101Y are useful background, but not essential.

A minimum of six full course equivalents are required in a 15 credit degree programme.

- INE350H
- At least one full course equivalent from at least three of the following groups of courses:
  - a) ANT201Y, 210Y, 226Y, 228H, 301H, 305Y;
  - b) DRM120Y; ENG264H; GRH234H; HIS248Y, HIS352Y;
  - c) FAH211H, 256H, 258H, 268H, 365H;
  - d) GER251Y; 271Y; HIS346Y; ITA275Y; SPA250Y, SPA280Y;
  - e) GGR253Y, 300H, 349H, 351Y;

Note: Students are encouraged to explore through related fields for appropriate complementary courses, and to seek faculty advice.

Native Studies (B.A.)

Faculty Coordinators: Professor R.M. Vanderburgh (Anthropology)

Professor W.B. White (History)

Issues involving Native peoples have become not only of contemporary concern, but have revived interest in the cultures and events of the past. This programme examines the cultures of the past and present, as well as the history and theoretical framework of the interaction of Native and colonizing peoples. The programme is interdisciplinary, combining the courses and approaches of Anthropology, History, Sociology, and Geography. It complements programmes with interests in North American studies, ethnic/racial history, and environmental studies. Students may pursue special interests through an independent study course.

Major Programme M01595

A minimum of 7 full course equivalents in a 15-credit degree programme.

Required Courses:

ANT241Y Indians of North America

SOC330H Race & Ethnic Relations

HIS330Y Indians and Indian Policies in American History (offered in alternate years)

Either

ANT304H Change in Canadian Indian Societies (offered in alternate years)

ANT319H Problems in the Study of North American Indians (offered in alternate years)

Optional Courses:

Four full course equivalents to be selected from the following;

ANT201Y North American Prehistory

ANT204Y Social and Cultural Anthropology

ANT228H Archaeological Field Work

ANT398Y Independent Research/ANT399Y Independent Research

GGR351Y Landscape, Economy and Society in the New World 1500-1900

HIS391H Mexico: Independence to Revolution, 1810-1960

HIS401Y Independent Reading/HIS403Y Independent Reading

SOC304Y Change and Conflict in Contemporary Society

SPA280Y Latin American Civilization and Culture

Population and Society (B.A.)

Faculty Coordinator: Professor W. Kalbach (Sociology)

This approved area of study is designed:

(1) to introduce students to the place of population issues in modern society and

(2) to develop in students basic demographic skills operable in academic, social service, planning and marketing agencies.

Major Programme M09255

A minimum of 7 full course equivalents in a 15-credit degree programme.

Seven full course equivalents (including prerequisites)

SOC101Y Introduction to Sociology

GGR255H Perspectives on Current Population Issues

HIS248Y (I) The Industrial Revolution SOC220Y Canadian Society

Either

SOC200Y Introduction to Social Research

Or

SOC201Y Social Statistics (offered alternately) SOC312Y Population and Society

ANT305Y Technology, Society and Culture

SOC422H Selected topics in Urban Sociology and Population I

Supplementary course sequence: It is strongly recommended that students also take one of the following groups of related courses:

Demographic Prehistory

ANT203Y (I) Physical Anthropology

ANT334Y Skeletal Biology

ANT433H Palaeodemography (offered in alternate years) NOTE: the student is encouraged to take ANT203Y in Year I

Cultural Relations

ANT204Y (I)Social and Cultural Anthropology

ANT242Y Modern Cultures of Canada

SOC330H Race and Ethnic Relations

NOTE: the student is encouraged to take ANT204Y in Year I

Canadian Urban Society

GGR245Y (I) Urban Canada

SOC205Y Urban Sociology

SOC422H Selected Topics in Urban Sociology and Population I

SOC423H Selected Topics in Urban Sociology and Population II

NOTE: the student is encouraged to take GGR245Y in Year I

Race and Ethnic Relations

PSY100Y Introductory Psychology

PSY220Y Introduction to Social Psychology

PSY321H Interpersonal Behaviour

SOC330H Race and Ethnic Relations

Renaissance Studies (B.A.)

Faculty Coordinator: Professor L.T. McCormick (Italian Studies)

Major Programme M05325

A minimum of seven full course equivalents in a 15 credit degree programme.

Three full course equivalents are required:

HIS357Y The Renaissance

ITA275Y The Culture of the Italian Renaissance (in English)

INE390Y Independent Study

Optional Courses:

Four full course equivalents to be selected from the following, with no more than two full course equivalents from any one discipline

ENG206Y English Literature of the Renaissance

ENG212Y Shakespeare

ENG302Y English Poetry and Prose, 1500-1600 ENG304Y English Poetry and Prose, 1600-1660

English Drama to 1642 ENG332Y

Studies in Renaissance Literature ENG413Y

FAH200Y European Art from 1400-1750

Raphael and Michelangelo as Painters FAH330Y

FAH331H Fifteenth and Sixteenth Century Italian Sculpture

FAH332H Studies in Baroque Painting

FAH336H The Ideal City

FRE220Y The Literature of Classicism

Politics and Social Change in England, 1530-1800 H1S230Y

HIS240Y Early Modern Europe, 1450-1815

ITA323H/324Y Renaissance Prose and Poetry

ITA326H Petrarca

ITA420Y Renaissance Epic Poetry

ITA427H Boccaccio

Spanish Literature of the Golden Age SPA350Y

Language Facility: a reading knowledge of Latin or of a major European language other than English is required at a level equivalent to a 100-series course (Latin recommended). The degree of facility will be assessed by the Discipline Representative of the language involved.

Urban Studies (B.A.)

Faculty Co-ordinator: Professor Gad (Geography)

The Urban Studies Programme is characterized by a unifying theme, not by any one perspective or methodology. The unifying theme for Urban Studies could be described as the study of the forces which give rise to towns and cities, the public policies directed at urban settlements, and the effects these particular forms of settlement have on society in a broad sense. The Urban Studies Programme enables the student to apply the viewpoints and methods of various disciplines to urban phenomena.

Students may graduate with a Specialist or Major programme in Urban Studies (for detailed requirements see below). Given careful programme planning it is possible to graduate with a double Specialist in Urban Studies and one of the traditional disciplines. The advantage of the double Specialist is the combination of an innovative, broad perspective on urban phenomena with a traditional methodological base. - It is relatively easy to combine either an Urban Studies Specialist with a discipline Major programme, or the other way round, a discipline Specialist with an Urban Studies Major programme.

It is advisable to plan an Urban Studies Specialist Programme, and especially a double Specialist, as early as possible, at least by the end of first year. Many of the urban courses have prerequisites that must be met or recommended courses which aid in preparation. For example, students interested in Urban Economics (ECO333Y) should be aware that the course has four prerequisites (ECO100Y, MAT132Y, ECO200Y, ECO220Y/STA242Y. Students are strongly urged to consult the Urban Studies faculty coordinator for programme planning and advice about the variety of different course combinations.

Specialist programme S22075

Ten full course equivalents are required in a programme of at least 20 courses.

 Methodology courses: 1 full course equivalent of the following: ECO220Y, GGR202H/212H, SOC201Y, STA202H/212H/242Y

2. Urban Courses

At least 5 full course equivalents from the following:

ECO333Y

FAH337H, 365H

GGR220Y, 245Y, 324H, 339H, 346H, 349Y, 357H, 441H

JGS340Y

POL308Y

SOC205Y, 328H, 422H, 423H

3. Contributing Courses

No more than 4 full course equivalents from the following:

FAH211H, 256H, 337H, 365H, 370H

GGR255H, 352H, 354H

SOC304Y, 312Y, 330H

### Notes:

- 1. In selecting from categories 2 (Urban Courses) and 3 (Contributing Courses) above, students should cover at least *three* disciplines (i.e. ECO, FAH, GGR, POL, SOC) but choose no more than *five* from any one discipline.
- Other courses not listed above may be included with the permission of the Urban Studies Programme Committee.

Major programme (Urban Studies) M22075

6 full course equivalents are required in a programme of at least 15 courses.

- 1. At least four full course equivalents from category 2 (Urban Courses) above.
- 2. No more than two full course equivalents from category 3 (Contributing Courses) above.

### Note:

In selecting from categories 2 (Urban Courses) and 3 (Contributing Courses) above, students should cover at least three disciplines with no more than *three* from any one discipline.

# **Special Erindale Programmes**

# Concentrated Programmes In The Humanities And In The Social Sciences Leading To A Bachelor Of Arts Degree

Faculty Coordinators: Professor R.W. Van Fossen (Humanities Programme)

Professor L.J. Brooks (Social Sciences Programme)

Well-qualified and highly-motivated students seeking a thorough grounding in either the Humanities or the Social Sciences before proceeding to further professional or academic training may be eligible for Erindale's concentrated programmes in these areas, leading to a fifteen-credit B.A. in two years.

Students seeking admission to either of these programmes should have a Grade 13 (Ontario) final average of 72% or the equivalent. However, in order to enter the second session of the programme, *all* students must have completed five full course equivalents with a GPA of 2.5.

Students are expected to complete fifteen courses during the winter and summer sessions. They may take a maximum of two courses each summer and a maximum of six courses during the winter session. Students who plan to follow either programme are strongly advised not to undertake part-time employment during the duration of their academic programme, except if and when taking a single course during the summer session.

### Humanities Programme: M08915

To secure a well-rounded preparation in the Humanities, a student will be expected to:

- (a) complete the requirements of the Erindale curriculum, including a major concentration or a major in an approved area of study, and a full course equivalent in each of the Divisions of Sciences and Social Sciences.
- (b) complete at least one credit in each of the following:
  - (1) a language
  - (2) literature or art
  - (3) history
  - (4) philosophy or religion

For the distribution of these courses among disciplines, consult the advisor.

# Social Sciences Programme: M16725

To secure a well-rounded preparation in the Social Sciences, a student will be expected to:

- (a) complete the requirements of the Erindale curriculum, including a major concentration or a major in an approved area of study, and a full course equivalent in each of the Divisions of Sciences and Humanities.
- (b) complete at least one credit in each of the following:
  - (1) mathematics or statistics or computer science
  - (2) economics or political science
  - (3) sociology
  - (4) geography or anthropology

For the distribution of these courses among the disciplines, consult the advisor.

In the final session in either programme, a course consisting of an individual research project under supervision may be undertaken. A student admitted to either of these special programmes will be assigned a faculty advisor who will assist in developing the programme of study and in guiding the student's academic progress.

Survey Science Programme

In 1972, Erindale College inaugurated a 20-course Specialist Programme in Survey Science that is unique in Ontario and one of only four professional surveying programmes in Canada. This Programme fulfills the academic requirements of the Association of Ontario Land Surveyors and, with the exception of some specific requirements of other associations, generally meets the academic basis needed for professional registration in other provinces and by the Board of Examiners for Canada Lands Surveyors. Students must, of course, determine the specific requirements that apply in other jurisdictions.

Overall, the Programme provides a sound education for the practice of all aspects of land, geodetic, photogrammetric, hydrographic and engineering surveying.

Full details of courses and other matters related to the Programme are given under the heading "Survey Science" in Section 7 (Courses and Programmes) and Section 8 (Details of Courses).

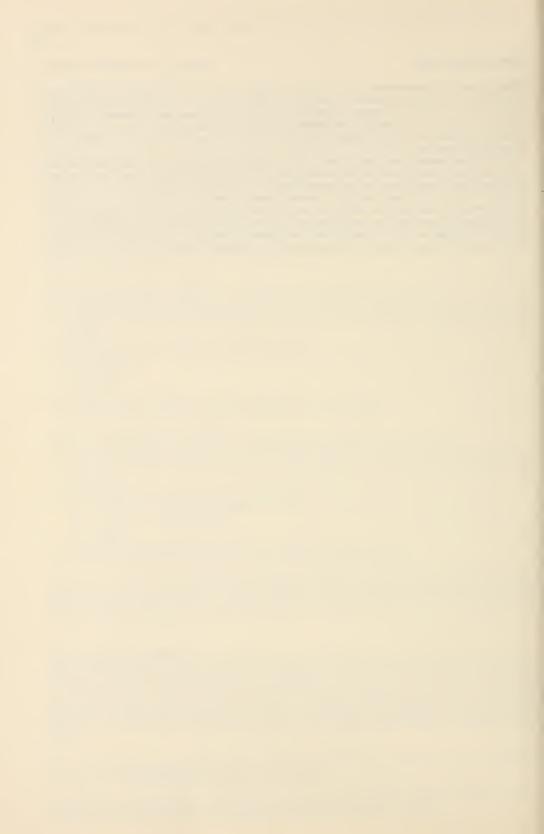
# **Other Programmes**

Study Elsewhere Programme

The Study Elsewhere Programme is designed to allow students to pursue their discipline of concentration at another university, normally outside of North America, for one academic year. The Programme also provides for study in Quebec or Mexico. It is intended to enhance the university experience of each participant through learning from scholars at other institutions and through living in a new and different milieu.

The faculty has intended the Study Elsewhere Programme for students who have completed a minimum of 9 credits and who intend to attain a degree of specialization in their further studies. The Committee, therefore, requires participants in the Programme to have completed a minimum of three courses in a discipline or in the area of study which they intend to pursue elsewhere.

Full information concerning this programme can be obtained from the Registrar's Office, Room 2122; the St. George Campus Calendar; and the Secretary of the Committee, Miss E. Ishibashi (978-3387). Each student authorized to participate in the Study Elsewhere Programme must pay a fee of \$155.00 to the Comptroller and present his receipt to his College Registrar prior to departure.



# 8 DETAILS OF COURSES

# **ANTHROPOLOGY**

Faculty Advisor: Professor L.R. Reinhardt

Anthropology is the study of human biology and culture and the interaction between the two. *Physical Anthropology* focuses on the evolution of man and his nearest primate relatives, revealed by fossil remains, and on the constitution, physiology and variation of living populations. *Cultural Anthropology* is the study of the way of life of peoples throughout the world: technologies, economies, societies, languages, and value systems; the functional interrelationships of these; and the relationship between culture and environment. Physical remains of the activities of populations no longer extant (e.g., habitations, tools, food remains) are investigated by archaeological techniques to reconstruct the cultures of the past and to trace their development from earliest time. Conclusions are drawn about the interaction of cultural and physical processes.

The Anthropology programme offers the student the general background necessary for the advanced training required for professional positions. It is the special concern of the faculty to introduce students to research methods of physical and cultural anthropology and to involve them in the research programmes of the department. Students planning an anthropology concentration should consult faculty members for advice.

Anthropologists are employed as faculty in universities and colleges, as researchers in museums, and by government. For additional information see *Anthropology as a Career* by Wm. C. Sturtevant and *The Study of Anthropology* by Morton Fried, available at the Erindale College Library.

The following Anthropology courses are considered as Science courses: ANT203Y, 228H, 229H, 231H, 328H, 330H, 332Y, 334Y, 336H, 338Y, 339H, 430Y, 433H, 434H.

NOTE: Consult current timetable for current offerings.

Please see Section 7 for details of Programme Requirement.

ANT100Y Introduction to Anthropology 52L, 26T

Anthropology is the global and holistic study of human biology and behaviour. This course is a survey of anthropology which includes five subfields: applied, archaelogy, linguistics, social/cultural, and physical anthropology. The material studied is directed to answering the question: what is it to be human?

ANT201Y
(I) North American Prehistory
A survey of culture history and process from the first appearance of people in North

America until the coming of the Europeans. Regional adaptations of prehistoric North American populations are explored.

ANT203Y

(I)

Physical Anthropology

palaeontology, skeletal biology, human genetics and variation, human growth, primatology and human adaptation. ANT204Y Social and Cultural Anthropology (I) A general introductory course emphasizing social and political organization, economics, and the development of theory. Specific cases of social dynamics are drawn from both traditional and contemporary societies. ANT207H **Introduction to Ethnographic Field Techniques** (Offered in alternate years) 26L (I) Recommended for those who may specialize in anthropology. Oriented around student projects; covers multiple aspects of field and research methodology (problem design, interviewing, record-keeping, quantitative analysis, etc.). ANT209Y Religious Behaviour and Systems of Thought (Offered in alternate years) 52L, 26T (I) A comparative view of myth, ritual and philosophical systems with emphasis on the religion of non-literate peoples. ANT210Y The Anthropology of Art (Offered in alternate years) 52P Comparative approaches to art and aesthetics in world cultures and the meaning and (I) function of art in specific cultural contexts. ANT212Y Traditional and Contemporary African Cultures (Offered in alternate years) (I) Survey of traditional African cultures and institutions, and the changes involved in the current movement toward industrialization. ANT216H Peoples of Oceania 26L Peopling of the Pacific Islands emphasizing the cultures of Polynesia. Recommended (I) preparation: ANT100Y. ANT226Y **Old World Prehistory** 52L (I) The archaeology of the varieties of human lifeways from the first appearance of human beings to the appearance of extensive written history. Topics to be covered include regional adaptations of prehistoric cultures in Africa, Asia, Europe and Oceania, the origins of agriculture, peopling of Australia and the New World, evolution of technology, the evolution of states and archaeological methods. ANT228H 70P Archaeological Fieldwork (I) Recommended for those who may specialize in anthropology. Practical field experience on a prehistoric archaeological site during the last two weeks of August and weekly evening meetings until December. Note that although the fieldwork itself occurs during the summer, the course continues into the Fall Term, and students taking this course should include it as part of their winter registration. *Prerequisite*: P.I. ANT229H Archaeological Laboratory Analysis 13L, 26P Analysis and description of archaeological material. Prerequisite: ANT228H and P.I. (I) ANT231H Laboratory Methods in Physical Anthropology (I) Recommended for those who may specialize in anthropology. The student will be guided in basic laboratory procedures on specific topics as they are discussed in the survey course. Corequisite: ANT203Y. ANT241Y Indians of North America 52L Survey of native cultures and discussion of the role of environmental and historical (I) factors. ANT301H 26L, 13P Visual Communication (Offered in alternate years) Emphasis on the use and application of basic audio-visual resources in documenting social process. Film and other graphic data will be analyzed and possible projects may involve the use of still, movie, video-tape filming, tape-recording and archival sources. Prerequisite: ANT100Y and P.I.

A survey of the field of physical anthropology. Topics will include human evolution and

52L, 26T

ANT304H Change in Canadian Indian Societies (Offered in alternate years) 26L
A seminar course examining the application of such concepts as "acculturation",
"adaptation" etc. to Canada's changing Native population. Prerequisite: ANT204Y or
ANT241Y, and P.I.

ANT305Y Technology, Society and Culture (Offered in alternate years) 78P

The role of technology in social and cultural change and adaptation, including an introduction to basic techniques and their historical development. *Prerequisite*: P.I.

- ANT319H Problems in the Study of North American Indians (Offered in alternate years) 26L Discussion oriented review of the history of the study of North American Indians and the contributions of prominent explorers, geographers and anthropologists. Survey of the literature emphasizing research opportunities; individual research on a topic chosen in consultation with the instructor; ANT397H may be taken concurrently to accommodate ambitious research papers. *Prerequisite:* ANT241Y.
- ANT324H Archaeological Interpretation 26T
  A survey of methods and ideas about the reconstruction of the past from the archaeological record including subsistence, population, social organization, religion, settlement plan and organization, etc. *Prerequisite*: ANT228H, ANT201Y/ANT226Y and P.I.
- ANT327H Origins of Food Production 26L
  The history of food production in the Old and New World. Survey of plants and animals used and traditional agricultural techniques.
- ANT328H Advanced Archaeological Fieldwork 26P Conducted concurrently with ANT228H. Instruction in archaeological field techniques, laboratory preparation, supervision of field and laboratory work. *Prerequisite*: ANT228H and P.I.
- ANT330H The Biology of Sexual Differences (Offered in alternate years) 26L An exploration into the bases of human sexual differences, considering both genetics and environment. *Prerequisite*: ANT203Y and P.I.
- ANT332Y **Human Origins** 52L, 26P A survey of human palaeontology and the evolutionary stages through which man passed in becoming *Homo sapiens . Prerequisite*: ANT203Y.
- ANT334Y

  Skeletal Biology
  Includes the method and technique of recovering, preserving, recording and analysing skeletal remains. The human skeleton will be studied in detail, and practical experience will be offered in the analysis of a skeletal population. *Prerequisite*: ANT203Y or P.I.
- ANT336H Human Heredity, Evolution and Variation
  The principles of human population genetics, evolution, and diversity are related to current events. *Prerequisite*: ANT203Y, 231H, and P.I.
- ANT338Y Primate Biology (Offered in alternate years)
  An introduction to the biology of non-human primates, including the study of soft skeletal anatomy of representatives of different taxa of extant primates. Prerequisite: ANT203Y and P.I.
- ANT339H Human Adaptability
  A survey of the nature and range of biological variation in modern man. *Prerequisite*:
  ANT203Y and P.I.
- ANT343H Comparative Sex Roles (Offered in alternate years)

  Various theoretical approaches to the study of sex roles in traditional, modernizing, and industrial societies. *Prerequisite*: ANT100Y. *Exclusion*: ANT343Y.

Independent Study	T
Supervised reading on selected anthropological topics. Prerequisite: Permission of F	ac-
ulty Advisor.	

- ANT398Y Independent Reading T Supervised reading of selected anthropological topics. *Prerequisite*: Permission of Faculty Advisor.
- ANT399Y Independent Research T Supervised research in anthropology. *Exclusion*: ANT430Y. *Prerequisite*: Permission of Faculty Advisor.
- ANT430Y Special Problems in Physical Anthropology T Supervised independent research in Physical Anthropology for students requiring science credit. Exclusion: ANT399Y. Prerequisite: P.I.
- ANT433H Palaeodemography (Offered in alternate years)

  The study of prehistoric human population. The course will explore aspects of mortality and life span in relation to age and sex ratios of human populations. *Prerequisite*: ANT334Y or P.I.
- ANT434H Palaeopathology (Offered in alternate years)

  The study of diseases of ancient populations, and the detection and interpretation of human skeletal pathology. Four facets are: 1) the comparison of populations, 2) the influence of disease on culture, 3) the temporal and geographical distribution of diseases, 4) clinical uses of the data. Prerequisite: ANT334Y or P.I.
- ANT490Y Seminar on the History of Anthropological Theory and Method (Offered in alternate years)

  Prerequisite: P.I.

  52S
- ANT499Y Advanced Independent Research T
  For students whose original research is leading toward a publishable report. Prerequisite:
  Permission of Faculty Advisor.

### **APPLIED MATHEMATICS**

(See Mathematics)

APM251Y Applied Mathematics I 52L, 26T Ordinary differential equations of the first order. Higher order linear differential equations and systems, infinite series, laplace transforms, lagrangian dynamics, applications. Exclusion: MAT244H, 214H, 249H, 235Y. Prerequisite: MAT132Y(C or better)/138Y. Corequisite: MAT239Y.

- APM311H Partial Differential Equations 26L, 13T
  Partial differential equations of applied mathematics, mathematical models of physical
  phenomena, basic methodology. Exclusion: APM351Y, 331H, 346H. Prerequisite:
  MAT235Y/MAT239Y and 214H.
- APM351Y Applied Mathematics II 52L, 26T Hyperbolic, parabolic, elliptic partial differential equations, separation of variables, eigenfunction expansions, integral transforms, Green's functions, examples drawn from Physics and Engineering. Prerequisite: APM251Y.

# **ASTRONOMY**

Faculty Advisor: Professor John B. Lester

Astronomy, of all the sciences, is perhaps the most wide-ranging in its content and in its implications. It embraces such topics as the origin and evolution of the planets, stars, galaxies and universe; the origin of life on earth and elsewhere; the behaviour of matter in varied environments and, in general, the influence of the universe on man's thinking down through the ages. Because of its breadth, it has always formed a valuable part of a general education. With this in mind, we offer courses of interest to every student at Erindale.

Three of these are introductory courses. AST100Y is a course in which students can learn about the universe even though they do not have a scientific bent. The course has no prerequisite, is largely descriptive, and covers the full range of astronomical topics. AST200H is also designed for students whose principal interests lie outside the sciences, particularly students who wish to limit themselves to a half course. This course presents up-to-date topics in some detail, and answers often-asked questions. Since this course is given in the evening, it is of particular interest to part-time students. For students with a scientific interest and background, AST120Y provides a deeper insight into the physical nature of planets, stars and galaxies, and also provides some understanding of the tools and methods used by the astronomer.

Courses of a more specialized nature are also available. AST251H is a unique interdisciplinary course which examines the broad topics of the nature of life, its origin and evolution on earth, and its possible existence elsewhere in the universe. It is intended for students who have some background in the behavioural, biological or physical sciences, either in grade 13 or in university. At a more advanced level, AST320H may be taken. It is intended for students with a serious interest in science (mathematics, physics, astronomy, space science or earth and planetary sciences), but requires no previous introduction to astronomy. We also recommend EPS237H as an excellent introduction to planetary astronomy.

Students who wish to take a major or specialist programme in Astronomy and Astrophysics should consult the Astronomy Faculty Advisor at Erindale, as early as possible during their first year.

Please see Section 7 for details of Programme Requirement.

# AST100Y Introduction to Astronomy

52L, 26T

A general survey of modern astronomy which gives a descriptive treatment of the nature of planetary and stellar systems and the present conception of the structure of the universe. This course is intended for students with no science background or those who do not intend to specialize in science. It is not open to students who are currently enrolled in or have completed a 100 or higher-series course in physics or a 200 or higher-series course in chemistry. *Exclusion*: AST120Y/200H.

# AST120Y A Survey of Astronomy and Astrophysics

52L, 26P

A general survey of astronomy in which concepts in basic physics are applied to a treatment of the solar system, stars and stellar systems, and the structure of the universe. This first-year course is intended for students who already have some background in science or those who are currently enrolled or in the future will be enrolling in science courses. *Exclusion*: AST100Y/200H. *Prerequisite*: Grade 13 MATR & F, Grade 13 PHY.

# AST200H The Universe - an Appreciation

(I)

26L

A topical course in astronomy designed for students in disciplines other than the sciences. The emphasis will be on fields of current interest in astronomy with the aim of interpreting recent and forthcoming developments. This course is not available to students who are enrolled in or have completed a 200 or high-series course in physics or chemistry. Con-tributes to Science credits for distribution purposes only, and not to B.Sc. Exclusion: AST100Y/120Y.

(I)

AST251H Life and the Universe (Offered in alternate years)(Formerly AST250Y)

26L

The course examines several questions of broad relevance to the physical and biological sciences: the origin of the chemical elements; the formation of simple and complex molecules in astronomical environments; the origin, nature and evolution of planetary systems; the origin and nature of life and life processes; the search for extraterrestrial life through planetary exploration and interstellar communication. *Exclusion*: AST250Y, NEW250(G), NEW251H(G). *Recommended preparation*: A basic knowledge of physical and/or biological science at the grade 13 level or beyond.

AST320H Stellar Astrophysics and Cosmology (Offered in alternate years)

26L

Current theories of the structure and evolution of the stars. Modern theories of the universe, and their observational basis. This course is intended for students specializing in the mathematical, physical or earth sciences. *Exclusion*: AST322H(G). *Prerequisite*: MAT132Y/138Y, PHY(118Y with a minimum of 70% and P.I.)/140Y.

AST425H Research Topic in Astronomy

Consists of a research report by the student in consultation with an individual staff member in the department. Students must enrol with the faculty advisor of the department on the Erindale Campus. *Corequisite*: AST420Y(G).

### **BIOLOGY**

Faculty Advisor: Professor J. Svoboda

Biology is the science of living organisms - their kinds, relationships, origins, evolution, structure, development, and functions. Biology relates to such major human problems as starvation, overpopulation, conservation, pollution, and to the whole field of medicine and disease. Living organisms may be studied from a variety of viewpoints such as biochemical, physiological, ecological, genetical, taxonomical, structural, and developmental, and from a variety of organizational levels from populations and individuals through organs, tissues, cells, and organelles, down to molecules.

Botanists and zoologists at Erindale cooperate closely in organizing courses and programmes in Biology which stress the relationships of living organisms in terms of structure, form, function, and environment at many levels of organization.

There is a variety of options available to students of Biology. By taking 7 courses from the selection outlined in Section 7 of this calendar, students may satisfy the requirements for a Major Programme in Biology. This major programme may be conveniently combined with a second major programme from another discipline, e.g., Biology and Physics, Biology and Chemistry, etc. Students who intend to become high school Biology teachers can, by taking the 8 core Biology courses listed under the Specialist Programme plus one additional full Biology course, meet the requirements for a Type A Certificate from the Ontario Department of Education. A student can, by completing the Specialist Programme in Biology presented in Section 7 of this calendar, obtain a four-year Bachelor of Science degree with the designation "Biology Specialist" on the transcript. Finally, students may elect to carry out an interdisciplinary (Biology-Psychology) specialist programme in Animal Behaviour; successful completion of the courses listed (see Psychology) will be recognized by the designation "Animal Behaviour Specialist" on the transcript. Staff will assist students in organizing appropriate groups of courses to accommodate specialized interests. Students following the Biology Major and Specialist Programmes must officially enrol in these programmes. This should be done by the beginning of their second year on College registration forms and directly with the Department in Room 3032.

Because of high demand and space limitation, it may be necessary to limit enrolment in some Biology courses. In these cases only those students who obtain the highest grades in the prerequisite courses will be enrolled.

Please see Section 7 for details of Programme Requirement.

BIO100Y The Study of Life

52L, 78P

Presents an integrated study of life at several levels: molecular, cellular, organismal, and social. Topics include cell and molecular biology, genetics, development, physiology, evolution, phylogeny, behaviour and ecology. Practical sessions will introduce a wide range of biological material and techniques; tutorials will help integrate laboratory and lecture.

JBG230Y

(I)

Man and Environment (Formerly JBG130Y)

52L, 26T

Past and present man-environment relationships are examined; principles of ecology, environmental ethics and esthetics are outlined; crucial alternatives for man are discussed. Problems of current environmental concern - land use, material and energy resources, pollution are considered and illustrated by case studies from different parts of the world. *Exclusion*: GGR101Y, BIO130Y, JBG130Y.

BIO230H

Ecology

26L, 39P

An introduction to ecological principles. The composition, structure and environments of natural ecosystems will be surveyed. Laboratory work will emphasize field investigations of communities in the immediate region. *Prerequisite*: BIO100Y. *Recommended preparation*: BIO235Y.

BIO231H

Ecology II

26L, 39P

A continuation of general ecological principles, specific studies of succession, competition, predation, and dynamics of populations and communities. Laboratory sessions will deal with ecological sampling techniques, experimental ecology and population studies. *Prerequisite*: BIO230H.

BIO235Y

Field Biology

52T, 78P

A field and laboratory course to acquaint the student with plants and animals in the local environment. Collection techniques and observation are emphasized in the field. Identification of major groups of animals and plants is studied in the laboratory. Students will be required to make a collection of some group of organisms.

BIO241Y

Cell Biology

52L, 78P

Cell structure and function. Cell organization from the molecular to the organelle level will be considered in animal, bacterial, and plant cells. Topics include the structure and function of membranes, ribosomes, nuclei, mitochondria, plastids, and other cellular constituents. In the laboratory the student will become familiar with current techniques of cell biology. Enrolment limited. *Prerequisite*: BIO100Y.

BIO250Y

Plant Form and Function

52L, 78P

A survey of the major plant groups from the higher algae up to the Angiosperms. The structure and life history of representatives are examined, including discussions of the functions of the major tissues and organs. The evolution of plants is discussed with particular reference to fossils. *Prerequisite*: BIO100Y.

BIO251Y

**Animal Form and Function** 

52L, 78P

The design and adaptive consequences of vertebrate and invertebrate structures are examined. Mechanisms of prey capture, feeding, transport, gas exchange, body support, locomotion, and sensory perception are compared at the organ level. The student is encouraged to see beyond description in order to develop an appreciation of the adaptiveness of body parts. *Prerequisite*: BIO100Y.

BIO270Y

**Biology of Microorganisms** 

52L, 78P

A survey of the major groups of microorganisms including bacteria, viruses, protozoa, lower algae and fungi. The structure and life histories of representative organisms are examined. The importance of the biology of microbes will be discussed especially with regard to ecology, pathogenicity and the scientific impact of studying certain "microbial model organisms" in elucidating important basic principles in biology. *Prerequisite*: BIO100Y.

BIO300H Terrestrial and Freshwater Biology

This course will be offered at the Leslie M. Frost Natural Resource Centre, near Dorset, Ontario. Emphasis will be on principles and methods in plant and animal ecology, and gaining familiarity with local flora and fauna. Terrestrial and freshwater ecosystems will be studied. Opportunity will be provided for students to undertake projects of their own. Students are selected on the basis of their academic background, grades, and career goals. The course is given in the two week period before the beginning of the fall term. Students must meet their own costs for board, lodging and transportation. Applications must be received by Erindale Biology Faculty Advisors before March 31st. Students selected will be notified promptly. Application forms are available from the Zoology Disipline Representative. Enrolment limited. *Prerequisite*: BIO100Y.

BIO301H Marine Biology

A field course in Marine Biology, at St. Andrews, New Brunswick, consisting of informal lectures and seminars with intensive field and laboratory work. Different marine habitats are examined in detail and the animals and plants associated with them are classified. Students carry out projects in which they are encouraged to develop their own ideas and interests. Lectures on special topics are given by the scientific staff of the Biological Station. Students are selected on the basis of their academic background, grades and career goals. The course is given in the two-week period before the beginning of the fall term. Students must meet their own costs for board, lodging and transportation. Application forms are available from the Zoology Discipline Representative. Enrolment limited. *Prerequisite*: BIO100Y.

BIO302H Arctic Ecosystems I

Summer field studies at Churchill, Manitoba, of approximately two weeks duration dealing with botanical, zoological, or other aspects of arctic ecosystems. *Prerequisite:* BIO100Y and approval by Undergraduate Secretary of Botany or Zoology at the St. George campus.

BIO303H Arctic Ecosystems II

A second summer field course at Churchill, Manitoba, like BIO302H. *Prerequisite:* BIO302H and approval by Undergraduate Secretary of Botany or Zoology at the St. George campus.

BIO320Y Plant Physiology
The principal physiological processes, and the influence of environmental factors on

them, will be studied in plants. Topics will include water relations, mineral nutrition, translocation, photosynthesis, respiration, general metabolism, and growth and development. These topics will be related to agriculture ecology and to biotechnology. *Prerequisite*: BIO100Y, CHM118Y/150Y.

BIO321Y Animal Physiology 52L, 78P

A comparative approach to the study of physiological processes in animals (including man), with emphasis on the understanding of underlying principles. Topics include respiration, excretion, osmoregulation, ionic regulation, and the physiology of muscle and nerve. *Prerequisite*: BIO100Y, CHM118Y/150Y. *Recommended preparation*: BIO251Y, PHY118Y/140Y.

B1O322H Animal Behaviour I: Social Factors 26L, 39P

The social systems of animals are based upon signals. Finding the right mate or avoiding predators and parasites requires the transfer of information. This course attempts to show how an analysis of signals can clarify and delimit the components of an ecological system. *Prerequisite*: BIO100Y or P.I.

BIO323H Animal Behaviour II: Physical Factors 26L, 39P
The responses of animals, largely invertebrates, to light, temperature, moisture, etc., both in the laboratory and in the field, as well as the consequences of their behaviour are

discussed. Arthropods, typically, are used in prescribed and student-designed experiments in the laboratory to illustrate a variety of these responses. *Prerequisite*: BIO100Y or P.I.

BIO330Y Plant Ecology

52L, 78P

The relationships of plant species, populations, and complexes at the sociological, environmental, and physiological level. Practical field work, laboratory studies, and experimentation are included. The course provides a background for practical training in conservation and environmental research. *Prerequisite*: BIO230H. *Recommended preparation*: BIO235Y.

BIO332Y

Freshwater Biology

52L, 78P

A functional analysis of aquatic ecosystems. Lecture topics include: physical environments of lakes and streams; determinants of productivity of algae, zooplankton, fish and benthos; determinants of species structure of each of these groups; the processes of eutrophication and acidification. In the laboratory, aquatic measurement techniques and taxonomy and ecology of local plants and animals will be emphasized. One two-day and two one-day field trips required. Enrolment limited. *Corequisite*: BIO230H.

**BIO333H** 

**Ecology of Forest Insects** 

26L, 39P

With forest insects as examples, the characteristics of insects and their responses to the biotic and weather factors that influence their success, are discussed. The impact of insect outbreaks on forests, using case histories, is considered. In the laboratory recognition of various stages in the life history of forest insects and the characteristics of their attack on trees are stressed. *Prerequisite*: BIO100Y. *Recommended preparation*: BIO230H, 231H.

BIO335H

Mycology

26L, 39P

A study of the biology of fungi with emphasis on their life histories, morphology, classification, ecology and significance to man. Laboratory sessions will include the collection, culture, and identification of a wide variety of fungi. In addition, several experiments illustrating important aspects of fungal physiology and development will be performed in the laboratory. *Prerequisite*: BIO100Y. *Recommended preparation*: BIO270Y.

BIO340Y

**Introductory Genetics** 

52L, 78P

Introduces the student to genetics with examples drawn from procaryotes and eucaryotes to illustrate: the molecular structure of the gene, mechanisms of gene action and gene regulation, levels of genetic organization, basic population genetics, and genetic aspects of evolution. Practicals will involve both directed and independent experiments. *Prerequisite*: BIO100Y (BIO241Y recommended).

BIO351Y

Invertebrate Form and Function (Offered in alternate years)

52L, 78P

Structural adaptations of invertebrate animals. Laboratories stress dissection and observation; living material is used wherever possible. Students become familiar with those structural features that form the basis of phylogenetic classification. *Prerequisite*: BIO251Y.

BIO352H

Developmental Biology I

26L, 39P

Begins with the study of the way eggs and sperm are formed and how they interact during fertilization. Subsequently an analysis of the biochemical and morphological events of early development is detailed. Finally, topics of special interest to Developmental Biologists, such as regeneration, metamorphosis, pattern and polarity, and cancer, are studied. The frequent use of live material in the laboratory exercises enables students to comprehend the dynamic aspects of the development of organisms. *Prerequisite*: BIO241Y

BIO353H

**Developmental Biology II** 

26L, 39P

This course is a logical continuation of BIO352H. Developmental systems drawn mainly from plant life forms and microbes are studied in more detail. Tissue and cell culture techniques are emphasized. Topics such as the biochemistry of hormone control, photoperiodicity, circadian rhythms, and environmental stimuli are studied as they influence development. Attempts are made to assemble simple rules which govern more complex patterns of development. *Prerequisite*: BIO241Y.

BIO354H Vertebrate Form and Function

26L, 39P

A continuation in greater depth of vertebrate topics begun in BIO251Y, with special emphasis upon morphological aspects of adaptation relative to function. Individual laboratory projects on selected vertebrates. *Prerequisite*: BIO251Y.

BIO355H Taxonomy of Vascular Plants

65P

A survey of the flora of Ontario. The emphasis of the course is on the practical identification of plants both in the herbarium and in the field. *Prerequisite*: BIO235Y/250Y.

BIO356H Major Features of Vertebrate Evolution

26L, 39P

The evolution of the vertebrates as evidenced by the fossil record. Special emphasis will be placed upon the origin and adaptive radiation of amphibians and reptiles. Practical sessions will include the study of fossils, and techniques of collection and preparation. Occasionally laboratories will be held at the Royal Ontario Museum. *Prerequisite*: BIO251Y.

JBP359Y Sociobiology: Biological Bases of Social Behaviour

52L, 78P

(Taught jointly with Psychology)

Concepts from ethology, ecology, and population biology will be introduced and applied to the understanding of the evolution and biological function of social behaviour. Topics will include altruism, aggression, social spacing, dominance, sex, parental investment and care, social symbioses, and the evolution of life histories. Emphasis will be placed on the complex social systems of insects and mammals. Laboratory sessions will involve field observations, demonstrations, and preparation of individual projects. *Prerequisite*: BIO100Y, PSY100Y.

BIO360H

Biometrics I

26L, 39P

An introduction to the basic principles and procedures of biological statistics. Topics will include probability, sampling theory, descriptive statistics, estimation, comparison of samples and analysis of frequencies. Collection and analysis of biological data will be done in the laboratory. Students are advised to combine this course with BIO361H for a complete introduction to Biometrics. *Exclusion*: Any 200-level course in Statistics.

BIO361H

Biometrics II

26L, 39P

A sequel to BIO360H in which additional topics in biological statistics are discussed. Regression, experimental design, non-parametric statistics, and a variety of analyses of variance are included. Collection and analyses of biological data will be done in the laboratory. *Exclusion*: Any 200-level course in Statistics. *Prerequisite*: BIO360H.

BIO370Y

Microbiology

52L, 78P

In depth discussion of microbial structure and ultrastructure; physiology and nutrition; growth and cultivation; nature of viruses (bacteriophage and a limited survey of animal viruses and their properties); the role of microorganisms in medicine, industry, agriculture, immunology, genetics, and ecology. Enrolment limited. *Prerequisite*: BIO100Y, CHM118Y/150Y. *Recommended preparation*: BIO241Y/270Y and CHM240Y.

BIO371H

Virology

26L, 39P

Fundamental principles and techniques of animal virology, including methods of tissue culture, virus cultivation and assay, and physiology of virus development, will be dealt with in detail. *Prerequisite*: BIO100Y, CHM118Y/150Y. (BIO270Y recommended). *Corequisite*: BIO370Y.

BIO420H

**Advanced Plant Physiology** 

26L, 13T

Lectures, discussions, and student presentations from the current literature will be used to examine selected topics in plant physiology and development including plant hormones, water relations, morphogenesis, or plant photobiology. Responses to environmental stresses will be emphasized. *Prerequisite*: P.I.

BIO421Y Advanced Animal Physiology

52L, 78P

Selected topics will be studied in depth including: comparative aspects of circulation and respiration, physiological adaptations to environmentally induced stresses, neuroendocrinology, and integration in selected regions of the mammalian brain. *Prerequisite*: BIO321Y. *Recommended preparation*: CHM240Y, 360Y.

BIO422H

Acoustic Behaviour

39S

The role of sound in animal communication. Mechanisms of sound production and reception, the signal function of sounds, and recording and analysis techniques are the major topics studied. *Prerequisite*: Introductory knowledge of animal behaviour (e.g., BIO322H, 323H).

BIO424H

**Biology of Sensory Systems** 

26L, 26T

A comparative approach to sensory physiology in a wide range of animals. The analysis of transduction and neural networks will incorporate anatomical, electrophysiological, biochemical, and behavioural aspects of sensory systems. *Prerequisite*: BIO321Y.

BIO430Y

World Ecosystems (Offered in alternate years)

52L

An investigation of the major biotic communities of the world. Their distribution, composition, structure, productivity and dynamic aspects are considered in relation to environmental influences. Practical experience includes a two week field trip commencing the week before classes begin. Communities in six of the eight major site regions of Ontario from James Bay to Lake Erie will be studied. Students must preregister for the field trip. *Prerequisite*: BIO230H, 330Y.

BIO431H

Population Ecology (Offered in alternate years)

26L, 13T

A further development of population concepts introduced in Ecology I and II, including analyses of the components of population growth, population regulation, and the evolution of reproduction and mortality schedules. Tutorials will involve practice with quantitative methods of measuring population density and analysing population growth, along with discussion of papers from the literature. *Prerequisite:* BIO230H, 231H, 360H.

BIO432H

Community Ecology

26L, 13T

An animal and plant ecology course dealing with patterns and processes at the community level. Topics will include community structure and diversity, community energetics, and biogeographical theories. *Prerequisite*: BIO230H, 231H, 360H.

BIO433H

Arctic Ecology(Offered in alternate years)

26L, 13T

The Arctic environment (climate, landscape, frost phenomena) is investigated. The characteristics of soils and plant and animal life are described and studied. Problems associated with increasing human activity in the Arctic are discussed. *Exclusion*: GGR241Y(G). *Prerequisite*: BIO230H.

BIO435H

Biogeography

39S

The historical, descriptive, and dynamic aspects of large-scale distributional patterns of plants and animals are examined. Course work consists of lectures, class discussions and written assignments based on a variety of published material. *Prerequisite*: BIO230H and 231H. (BIO340Y recommended or P.I.)

BIO440Y

**Advanced Genetics** 

52L, 52P

A course designed to familiarize the student with current advances in genetics. Major topics will include: the organization of the nucleus; nuclear cycle; structure and function of chromosomes and chromatin; cytogenetic aberrations; recombination and fine structure analysis; gene products and the regulation of gene expression; extra chromosomal inheritance. Laboratory sessions will include selected experiments and critical discussions of current literature.

BIO441Y Electron Microscopy

26L, 78P

An introduction to the theory and practice of electron microscopy and its application to the study of the ultrastructure of cells and tissues. Laboratory work includes instruction in the preparation of specimens and the use of the microscope, and an individual project. *Prerequisite*: Written permission is required to enroll. See instructor during registration week.

BIO442H

Evolution

26L, 39P

The course concentrates on current concepts in evolutionary theory. Some of the topics that will be covered include: mechanisms of speciation, mimicry, character displacement, genetic drift and the founder effect. Laboratories include individual presentations and modeling of evolutionary processes. *Prerequisite*: BIO340Y.

BIO452H

Advanced Topics in Cell and Developmental Biology

39L

This course focuses on the current state of affairs in certain areas of cell and developmental biology. Topics such as intercellular communication, cell-to-cell adhesion, cell fusion, morphogenesis and differentiation will be covered. Lectures and seminars will involve critical discussions of recently published research articles. *Prerequisite*: BIO241Y, BIO352Y and P.I.

BIO455H

Developmental Molecular Biology

13L, 26T

An examination of recent information on the molecular control of development in eukaryotes. Current ideas on the regulation of nucleic acid biosynthesis (nucleo-proteins, hormones, "specificity factors") will be reviewed for plants, animals, and eukaryotic microbes. An analysis of how current data fit into the theoretical models of gene regulation and development will be made. The course will include student discussions of published research articles. This course is the same as BOT455H(G). Every other week the class meets on the St. George Campus. *Prerequisite*: BIO241Y, 340Y, 352Y, and P.I.

BIO456H

**Biosystematics** 

26T, 39P

A consideration of the principles of taxonomy with particular emphasis on vascular plants. Topics to be discussed include the species concept, polyploidy, numerical taxonomy and geographical and ecological variation. Each student will be required to undertake an investigation of the variation found in a selected population of plants. *Prerequisite*: BIO235Y/250Y, (BIO340Y recommended). *Corequisite*: BIO340Y and P.I.

BIO470Y

Molecular Biology

52L, 78T

To provide a background for students of biology and other sciences for further study in modern biology. The course will deal with microbial and viral genetics; the structure, function, and biosynthesis of nucleic acids and proteins; cell permeability; bioenergetics; regulatory mechanisms in bacteria; modern physio-chemical methods in studies of biomolecules, etc. *Prerequisite*: BIO241Y, 370Y. *Corequisite*: CHM360Y, P.I.

BIO471H

**Microbial Host-Parasite Interaction** 

26L, 39P

This course deals with the interaction of bacterial and fungal pathogens with their respective hosts. The molecular basis of pathogenicity and the various defense mechanisms employed by hosts will be examined in depth. The medical and economic implications of pathogenesis and the role of the environment in mediating pathogenesis will be considered. The host-parasite interactions to be analyzed in this course will include systems where the hosts are animals, plants, fungi, and bacteria. *Prerequisite*: BIO241Y, 370Y. *Recommended preparation*: CHM360Y, MPL334Y.

BIO480H

Biology Research Project I

A research project carried out under the supervision of a staff member. Open to third and fourth year students. May be taken as a summer course. Written consent of staff member supervising the project must be obtained for registration. Seminar presentation may be required.

# BIO481H Biology Research Project II

Open only to students who have completed their third year. Student may combine BIO480H and BIO481H into a single project. May be taken as a summer course. Written consent of the supervising staff member must be obtained for registration. Seminar presentation may be required.

# CHEMISTRY

Faculty Advisor: Professor E.A. Robinson

Chemistry has as its scope of intellectual inquiry the study of the processes by which substances in the inanimate and animate world are changed into other substances, both in nature and in modern industry. From an understanding of the structures and properties of atoms and molecules, changes associated with chemical reactions can be interpreted and predicted and new substances synthesised. Chemistry has a vital role in modern science-based industry and on the development of the improved quality of life and health of our society. It is more and more applied to increasing our understanding of medicine, biology, geology, psychology, metallurgy, astrophysics, and many other branches of science. As a university subject it is becoming increasingly recognized as a sound basis for the kind of imaginative and disciplined thinking that has application beyond science to many other occupations and endeavors. The courses offered in the recommended programmes in Chemistry provide not only a basis for careers in science but a good general education of wide applicability.

Science and technology have been responsible for discoveries and developments of inestimable benefit but these have been accompanied by new hazards and problems, many of which are only now becoming apparent. Some of these are associated with our inability until recently to recognize the finite and exhaustible nature of world resources available to man; others arise from industrialization and overpopulation. Chemistry has an important role in solving the problems of energy conservation, nuclear waste disposal, environmental pollution, famine, and the many other problems of society. Many of the future advances and breakthroughs in understanding will have to originate from the kind of interdisciplinary research in which chemists trained to solve problems will have to be involved.

Specialist Programmes: The various programmes in Chemistry offered at Erindale College provide a very suitable preparation for those who intend to enter the work force in industry, to teach chemistry in high school (Type A certificate) or to continue into a graduate programme.

Four Specialist Programmes in Chemistry are presently available at Erindale: CHEMISTRY, CHEMISTRY & BIOCHEMISTRY, CHEMISTRY & GEOLOGY, AND CHEMISTRY (PHYSICAL CHEMISTRY) and the detailed requirements associated with these are listed in Section 7 of this calendar. The first three years of the BIOCHEMISTRY Specialist Programme may also be taken at Erindale. In addition, a CHEMISTRY MAJOR programme is available for students enrolled either for a three-year or four-year degree who wish a strong background in chemistry as part of a more general science programme. The content of each programme reflects the kind of training that is expected of students entering graduate study or other professional work in the area defined by the programme title. It is very important to plan your programme well in advance and to consult regularly (at least once a year) with the Faculty Advisor. It is particularly desirable to take specific courses in the year of study for which they are designed (e.g., CHM200 courses in Year II, etc.), as serious timetable clashes are likely to arise if this advice is not followed. In particular, students planning a programme in which chemistry plays a major role are strongly advised to take CHM215H, CHM230H, CHM226Y, and CHM240Y/241Y in their second year. While some deviations from the Specialist Programmes listed are possible, students should consult the Faculty Advisor before departing from the recommended programmes.

A Specialist Programme is not formally required for entry to graduate school in Chemistry but these programmes constitute an excellent preparation for this purpose. They also provide a means of attaining Type A teacher certification for those intending to teach chemistry at high school level. In addition, many of the courses listed provide excellent preparation for students whose main interests lie in the biological or earth sciences.

Please see Section 7 for details of Programme Requirement.

CHM118Y General Chemistry

78L, 33P, 30T

Fall Term: Chemical stoichiometry, behaviour of gases, equilibria, thermochemistry, introduction to atomic and molecular structure, periodic properties of the elements.

Spring Term: Kinetics and mechanisms, applications of the principles of equilibria and kinetics, descriptive inorganic and organic chemistry.

Note: CHM118Y is a sufficient prerequisite for CHM240Y only. For other higher level chemistry courses, a standing of at least 70% must be achieved in CHM118Y. Exclusion: CHM150Y. Prerequisite: Grade 13 CHM and MAT (R and F/C) Corequisite: MAT132Y/138Y.

CHM150Y Basic Concepts of Chemistry

78L, 33P, 30T

Note: All first-year chemistry students must enroll in CHM118Y. Those who qualify may have their registration changed to CHM150Y in the spring term.

Fall Term: See CHM118Y.

**Spring Term:** Thermodynamics and electrochemistry, introductory quantum theory and wave mechanics, molecular structure, kinetics and mechanisms, coordination chemistry. *Exclusion:* CHM118Y. *Prerequisite:* Grade 13 CHM and MAT (R and F/C), a minimum of 60% in the fall term of CHM118Y. *Corequisite:* MAT132Y/138Y (PHY140Y required for specialist programmes in chemistry or B in PHY118Y).

CHM215H Fundamentals of Analytical Chemistry

26L, 52P

A rigorous introduction to the theory and practice of classical analytical chemistry. Gravimetric methods: direct and indirect precipitations. Volumetric methods: acid-base, redox, precipitation, and non-aqueous titrations. Introduction to statistical concepts in treatment of analytical data. *Prerequisite*: CHM150Y or 118Y (Grade B).

CHM226Y Physical Concepts in Chemistry

78L, 52P(S)

This course will provide the physical background to modern chemistry. The laboratory course will be optional but those students intending to take CHM321Y are strongly recommended to take it. Topics covered will include: thermodynamics, colligative properties, phase transitions, chemical kinetics, diffusion, conceptual foundations of quantum theory and spectroscopy. Examples will be drawn that are applicable to a wide range of disciplines including chemistry, biochemistry, and geology. *Exclusion*: CHM220Y, 221Y, 222Y. *Prerequisite*: CHM150Y or CHM118Y (Grade B); MAT132Y/138Y. *Corequisite*: MAT235Y is recommended and is one of the prerequisites for CHM321Y.

CHM230H

**Introductory Inorganic Chemistry** 

26L, 52P

Brief review of atomic structure; chemical bonding; ionic solids; the chemistry of anions; coordination chemistry; solvents, solutions, acids and bases; introduction to the periodicity of the elements. The laboratory course introduces the student to a range of synthetic, analytical and instrumental techniques. *Prerequisite*: CHM150Y or 118Y (Grade B). *Corequisite*: CHM240Y/241Y, 226Y or P.I.

CHM240Y

**Introductory Organic Chemistry** 

52L, 52P(F)

The fundamentals of organic chemistry appropriate for biologists, pharmacists and medical school candidates who need a broad general background. The material includes synthesis and reactivity of the major classes of organic compounds from the standpoint of modern theories of structure and reaction mechanisms. The laboratory includes basic techniques and selected examples of synthesis of organic compounds. *Exclusion*: CHM241Y. *Prerequisite*: CHM150Y or CHM118Y.

CHM241Y Organic Chemistry I

78L, 52P(F)

Part I of a two-year sequence in organic chemistry for students intending to specialize in the subject. The course will cover the same material as CHM240Y but a greater depth of understanding will be expected. *In addition* there will be a thorough examination of stereochemistry, more advanced synthetic methods, and applications of spectroscopy. The laboratory course will be very similar to that of CHM240Y. Students who might be taking organic chemistry in third year should register in CHM241Y rather than CHM240Y. *Exclusion*: CHM240Y. *Prerequisite*: CHM150Y or CHM118Y (Grade B). *Corequisite* CHM226Y, 230H.

CHM314Y

Instrumental Analytical Chemistry(Formerly CHM315H,316H)

52L,104P(S), T

Introduction to the basic theory underlying important techniques in analytical chemistry.

Techniques to be discussed will be selected from UV, Visible, Infrared, Raman and Atomic Absorption spectroscopy, photoelectron, Auger and mass spectrometry, x-ray fluorescence and spectrofluorimetry, electroanalytical chemistry, gas-liquid and high pressure-liquid chromatography. The course includes a discussion of the use of microcomputers in the chemical laboratory, digital electronic computer interfacing and on-line computer techniques. Applications in industry, pharmacy and analytical biochemistry are

CHM326Y Physical Chemistry

Quantum mechanics and fundamentals of spectroscopy, intermolecular forces, statistical mechanics and applications to chemical systems, theoretical aspects of reaction kinetics.

In addition to the lectures students will be required to learn FORTRAN programming in order to be able to solve theoretical problems. Exclusion: CHM321Y. Prerequisite: CHM226Y, MAT235Y/239Y/APM251Y.

illustrated. Prerequisite: CHM215H. Recommended preparation: CHM226Y.

CHM330Y Inorganic Chemistry

52L, 104P

Introduction to transition elements; theories of bonding in transition metal complexes; complexes of π-acceptor ligands; organometallic compounds; organometallic compounds in homogeneous catalysis; thermodynamics of complex formation; mechanisms of reactions of metal complexes; descriptive chemistry of selected transition metals; descriptive chemistry of selected main group metals. The laboratory course covers a wide range of synthetic, analytical and instrumental techniques. *Prerequisite*: CHM230H.

CHM340Y Organic Chemistry II

The stereochemistry of organic compounds in relation to their physical and chemical properties and to factors affecting rates of reaction. Mechanistic aspects of organic reactions. The application of both stereochemical and mechanistic considerations to the synthesis of polyfunctional organic compounds. *Prerequisite*: CHM241Y(CHM240Y and P.I.).

CHM347H Organic Chemistry of Biologically Important Compounds
The chemistry of selected classes of naturally occurring molecules with emphasis on structure, stereochemistry, properties and synthesis. Amino acids, peptides, proteins, carbohydrates, nucleosides, nucleic acids, terpenes and steroids.

Corequisite: CHM340Y/P.I.

CHM360Y Biological Chemistry

A lecture course in general biochemistry. Topics include the physical chemistry of proteins, enzyme reaction kinetics and mechanisms, metabolic processes and mechanisms of cellular regulation, bioenergetics, membrane biochemistry and biophysics, molecular genetics and protein biosynthesis. Students will submit a comprehensive term paper based on a research topic of current biochemical interest. CHM360Y is equivalent to BCH321Y(G). Prerequisite: CHM240Y/241Y. Corequisite: CHM226Y. CHM230H, 340Y recommended.

CHM371H Techniques in Biological Chemistry

A laboratory course to complement CHM360Y. Experiments are designed to familiarise students with techniques commonly used to study the chemical and physical properties of biological molecules. Topics covered include a wide range of chromatographic methods, the isolation and characterization of subcellular organelles, enzyme purification and kinetics, isolation and characterization of nucleic acids and lipids, and radioisotope methodology. CHM371H is equivalent to BCH371H(G). Corequisite: CHM360Y.

CHM411H, 412H Topics in Chemistry

26L

These courses will comprise groups of ca. 26 lectures. The following topics have been offered in recent years and the selection to be offered 1983-84 will depend on enrolments. Generally a minimum of 4 students is required before a topic is given. Interested students should consult the Faculty Advisor.

Theory of Optical Spectroscopy (equivalent to CHM424H (St. G.))

Theory of radiation, time dependent perturbation theory, transition probabilities, oscillator strength, simulated emission, atomic spectra, UV, visible, IR and Raman spectroscopy. *Corequisite*: CHM321Y.

Non-Aqueous Solution Chemistry

The range of non-aqueous systems, their properties and use as preparative media; classification of non-aqueous solvents; general theories of acid and base; experimental methods in non-aqueous systems and a detailed examination of specific examples, including H<sub>2</sub>SO<sub>4</sub>; super acid media; liquid NH<sub>3</sub>; hydrogen halides; dinitrogen tetroxide; liquid SO<sub>2</sub> and dimethyl sulfoxide. *Prerequisite*: CHM226Y.

Structural Inorganic Chemistry

Methods of structure determination including X-ray and electron diffraction, infra-red, Raman and n.m.r. spectroscopy. A survey of bonding theories and a comparison of the successes and failures of Valence Shell Electron Repulsion Theory applied to the compounds of non-transition and transition elements. *Prerequisite*: CHM330Y.

Organometallic Chemistry (equivalent to CHM432H (St.G.))

Synthesis, structure, stability, and reactivity of metal-carbon bonds. Alkyl and aryl derivatives of the main group metals; transition metal-carbon o-bonded organometallics; transition metal  $\pi$ -bonded organometallics; effects of other ligands on the reactivity of metal-carbon bonds; role of organometallic complexes in catalysis, e.g. olefin hydrogenation, dimerisation, polymerization, isomerization. *Prerequisite*: CHM330Y. *Recommended preparation*: CHM340Y.

Bioinorganic Chemistry

Thermodynamic, spectral, and magnetic properties are considered to determine the structural and functional roles of metal ions in proteins, enzymes, and metal activated systems. Metalloenzyme catalytic mechanisms are compared with those of simple inorganic complexes. *Prerequisite*: CHM330Y, 360Y/BCH321Y.

Computer Simulations of Chemical Systems

Topics will include: elements of at least two computer languages (APL and PAS-CAL/FORTRAN/PLI; matrix algebra in APL (generalized matrix operations, illustrations on bit/byte manipulations, and analysis of genetic coding); simulation and analysis of chemical reaction rates and mechanisms, and multiple equilibria, such as buffers; evaluation of high order and multiple equations by trial and error; integration and differentiation, and the fitting of experimental data to polynomials.

Additional topics could include: advanced thermodynamics, synthetic organic chemistry, organic photochemistry, advanced biochemistry. *Prerequisite*: P.I.

### CHM415Y Dissertation Based On Literature Research

The dissertation will be based on literature research of a given area and would be expected to occupy one-fifth of a student's programme. Introductory reading will be necessary early in the course to bring students to a level where they can appreciate the most recent work in their topic. The dissertation will be conducted under the guidance of a chemistry faculty member on a topic other than the student's research topic in CHM419Y. *Prerequisite*: P.I. and CHM220Y/221Y/226Y and three of CHM321Y, 330Y, 340Y, and 360Y.

# CHM419Y Introduction to Research in Chemistry

An experimental or theoretical research problem in chemistry under the supervision of a member of the chemistry staff. The total time involved would be of the order of 250 hours, and students, in addition to carrying out research on their own projects, will be encouraged to participate fully in the laboratory activities of their chosen research groups. A final report incorporating the aims and results of this research will be required. *Corequisite*: At least one 400-level chemistry course and P.I.

### CLASSICS

See also Greek and Roman History (GRH) Greek and Latin Literature (GLL) Greek (GRK), and Latin (LAT)

Faculty Advisor: Professor T.G. Elliott

Classics is the study of the civilizations of Greece and Rome. The achievements of these civilizations are of interest in their own right, but they are also interesting in that they have been the foundation of so many aspects of our own civilization; of art, literature, language, philosophy, government. Courses in Classics thus present background material which is indispensable for the understanding of many other studies in the Humanities.

Courses are offered at Erindale in five areas. Three of these require no knowledge of the original languages: (1) Classics (CLA). (2) Greek and Roman History (GRH). (Upon application to the Department of History students may receive credit for these courses toward the Specialist Programme in History.) (3) Greek and Roman Literature, read in translation (GLL). (This heading also includes the study of myth and religion.) The other two areas are Latin (LAT) and Greek (GRK) language and literature studied in the original. Beginners' courses are offered in both languages.

For courses in Classics see also Greek and Roman History (GRH), Greek and Latin Literature (GLL), Greek (GRK), and Latin (LAT); also FAH101Y, 256H, HIS485Y, 486Y.

Please see Section 7 for details of Programme Requirement.

# CLA201H Latin and Greek in Scientific Terminology

39L

The study of technical and scientific terms derived from Latin and Greek: word elements, formation, analysis. The course is designed to assist students in medical, biological, and related studies in making sense of the technical terminology of these fields by explaining its origins in ancient Greek and Latin.

### COMMERCE

Faculty Advisor: Ms. C.E. LaHay Student Counsellor Mrs. V. Boon

The objective of the programme in Commerce and Finance is to help students develop the analytical abilities needed to solve problems and make decisions in organizations and to participate in and contribute constructively to our society generally.

The programme at the University of Toronto has long had a strong and unique Economics content - one that equips graduates particularly well for the future in view of the increasing interaction between the private and public sectors of our economy and the special social, economic, and business problems that face us as a nation. It incorporates this philosophy by requiring the same minimum number of courses in each of Economics and Commerce.

The programme offers the student a foundation on which to build managerial and professional skills. Areas of study embrace the economic and legal environments of the enterprise, the determinants of organizational strategy, and the problems of achieving effectiveness within an organization.

The earlier parts of the programme emphasize studies of the accounting system that provides a basis for the flow of information within a business and to investors, of the economic factors that shape competitive and co-operative action in society and, generally, of the structure of our economic and social institutions. More senior courses then build on these subject areas by dealing in depth with administrative and organizational behaviour, accounting policies and research, and marketing, production and financial strategies.

The programme also gives attention to the public sector and recognizes the increasing importance of applying administrative skills in the management of governmental institutions.

A student may design a programme for a B.Com. degree in such a way as to place special emphasis in Third and Fourth Years on one or more of the general areas of commerce, economics, accounting and finance, depending upon his plans for the future. Students who choose to emphasize commerce tend to accept positons in business or government service on graduation or to undertake further studies at the graduate level in business administration or law. Students who choose to emphasize economics may make a number of sub-choices within the field - for example, in economic theory, in mathematical economics, in economic history, and in economic development. A significant number of students who have made this choice have then undertaken graduate studies in economics and some have proceeded to academic careers. Students who choose to emphasize accounting and finance may make careers in the accounting profession and in the financial world; a significant portion of the class has been so inclined in recent years.

There are two degree programmes in Commerce offered at Erindale: Commerce and Finance Specialist (B.Com.) and the Major in Commerce (B.A.). In addition COM100Y is available to students seeking degrees outside of the Commerce discipline. All Commerce courses above the 100 level require ballots to be filed in the Commerce Office in the spring. The ballots will be used as a basis for checking whether the students are eligible to enroll in the course and to allocate places in courses which become oversubscribed.

Please see Section 7 for details of Programme Requirement.

COM100Y Financial Accounting

52L, 13P

Basic theory and concepts which underlie the preparation of financial statements, double entry theory and practice, the accounting cycle from the recording of transactions to the year end entries and preparation of financial statements, and problems of measuring income. This course is compulsory for students who intend to apply for the Commerce and Finance Specialist Programme and is recommended for students who intend to apply for the Major. *Exclusion*: COM203H.

COM203H

Financial Accounting

26L

Introductory course in financial accounting and reporting. This is the first Commerce course available for students in the Commerce Major programme who did not take COM100Y. (Not available to students in the B.Com. programme) *Exclusion*: COM100Y.

COM204H

Managerial Accounting

261

Introductory course in managerial accounting. (Not available to students in the B.Com. programme.) *Exclusion*: COM220Y. *Prerequisite*: COM100Y/COM203H.

COM220Y

**Management Accounting** 

52L

The development of information for management decision making and control. Topics include costing, capital budgeting, and selected analytical tools such as regression analysis and inventory models. Case discussions and computer applications will be used where appropriate. *Exclusion*: COM204H. *Prerequisite*: COM100Y.

COM300Y

The Legal Environment of Business

52L

Development of an approach to reaching decisions objectively and examination of how law, as an institution, accommodates business convenience and social policy. Analysis of legal devices commonly encountered in the operation of a business. *Prerequisite*: ECO100Y. (Not available to students in the Commerce Major programme).

COM320Y

Financial Accounting Theory and Policy

52L

Theory of and critical examination of corporate financial reporting and generally accepted accounting principles. *Prerequisite*: COM220Y.

Introduction to Public Administration (Formerly COM323Y) POL322Y

52L, 26T The literature of public administration and some of the main issues of the present and recent past in Canada and to a limited extent in Britain and other countries. In other countries primary emphasis will be on policies or features that have influenced Canadian practice. In the B.Com programme this course qualifies as either a Commerce or Political Science course. Prerequisite: COM100Y/203H/POL100Y. (The POL100Y prerequisite is strongly recommended).

COM324H

Investments 26L Security analysis and portfolio management. Emphasis is placed on an analysis of bonds and common stocks. Prerequisite: COM100Y, ECO202Y, 220Y/STA242Y. Corequisite: COM337Y.

COM325Y

**Managerial Economics** 52L The micro-economic tools of analysis relevant to management problems in both the private and public sectors. Topics include the nature of the firm, empirical demand and cost analysis, the economics of risk and uncertainty, the economics of information, public enterprise economics, the economics of regulation and regulatory practices in Canadian industry, transfer pricing problems, technological change and market structure. In the B.Com. programme this course qualifies as either a Commerce or an Economics course. Prerequisite: ECO200Y, MAT132Y/138Y, ECO220Y/STA242Y.

COM331Y

Finance 52L. The financial decision-making process including the financing, investment, and dividend decisions of the firm. Institutional aspects of finance, with emphasis on the characteristics of various debt and equity instruments available in Canadian capital markets. (Not available to students in the B.Com. programme). Prerequisite: COM204H/220Y, ECO100Y, ECO220Y/STA202H and STA212H/STA242Y.

COM337Y

**Business Finance** Valuation models, cost of capital, capital budgeting, investment under uncertainty, the use of leverage, dividend policy, the financial environment within which Canadian companies operate and the characteristics of various debt equity instruments available in the Canadian capital market. Prerequisite: COM220Y, MAT132Y/138Y, ECO220Y/STA242Y. Corequisite: ECO200Y/202Y.

COM349H

Fundamentals of Marketing Study of the interacting institutions and business activities designed to plan, price, promote and distribute products and services to present and potential consumers. (Not available to students in the B.Com. programme.) Prerequisite: COM204H, ECO100Y.

COM350Y

Marketing Market definition, consumer behaviour, and marketing functions: product line development, pricing, distribution, promotion, salesforce management, advertising, research, and planning. Prerequisite: COM220Y, ECO200Y/202Y.

COM410H

**Marketing Management** 26S Emphasis on marketing management in a dynamic environment. Deals with decisionmaking concepts and tools useful in identifying, structuring and solving marketing problems, planning and control. *Prerequisite*: COM350Y and permission of instructor.

COM420Y

Accounting Literature and Research 52S Seminar for the critical discussion of research bulletins and monographs of the leading accounting bodies in Canada, the United States and Britain, of articles in current issues of accounting journals, and of classic articles in books of readings. Review of contemporary and controversial issues in accounting theory. *Prerequisite*: COM320Y and permission of instructor.

COM422Y	Quantitative Systems Analysis	52L
	Quantitative analysis for management decision-making in the areas of marketing,	finance,
	operations, personnel and the public sector. Models found applicable for the ana	alysis of
	decision problems: linear and non-linear programming, dynamic programming,	network
	analysis, games and statistical decisions, Markov processes, queueing models and	l simula-
	tion. Prerequisite: COM220Y, MAT132Y/138Y, ECO220Y/STA242Y.	

- COM423Y Canadian Business Taxation 52L Introduction to the technical provisions and broad policy issues involved in taxation of business enterprises in Canada. *Prerequisite*: COM220Y, ECO200Y/202Y. *Corequisite*: COM337Y. Students who already hold a University degree are exempt from the ECO200Y/202Y prerequisite.
- COM427H Introduction to International Business 26L

  The interaction of the international environment with business operations; the adaptation of business strategy for the economic, socio-political and cultural environment prevalent in foreign areas of business opportunities. Canada as a host to international business; problems faced abroad by Canadian and other businesses. Cases deal with foreign risks and management alternatives to those risks. *Prerequisite*: COM220Y, ECO200Y, 202Y.
- COM428H Management Control

  The case method will be used to provide an understanding of the issues and environment of management control, and will integrate material from other courses in Commerce and Economics in the solution of problems in systems design and operation. *Prerequisite*: COM220Y and permission of instructor.
- COM430H Advanced Auditing Topics

  The analytical and conceptual foundations of audit practice. Objective integration of audit evidence to support a professional opinion on financial statements; auditing EDP systems, management audits. *Prerequisite*: COM320Y, CSC139H, ECO200Y, ECO220Y/STA242Y.
- COM437H Supervised Reading Course on an Approved Subject
  Open when a faculty member is willing and able to supervise. Students must obtain approval of a Committee of the Commerce Faculty, The Director of Commerce and supervising faculty member before enrolling.
- COM439H International Finance 26S
  International financial markets, exchange rates, forward markets, interest rate parity.
  International dimensions of investment, including both portfolio and foreign direct investment. International dimensions of corporate finance, including valuation and the cost of capital of foreign investments. *Prerequisite*: COM337Y.
- COM441H Theory of Administrative Behaviour I
  Theoretical ideas and empirical data concerning individual and group behaviour in organizations. Relevance of these for problems confronting management: motivation, influence, communication, supervision and decision-making. Exclusion: WDW103Y. Prerequisite: COM220Y, ECO200Y/202Y.
- COM442H Theory of Administrative Behaviour II Evolution of managerial and organization theory and practice from the classical approach of bureaucratic theory to the concepts of the organization as an open system. The managerial assumptions and implications applied to organizational problems. Exclusion: WDW103Y. Prerequisite COM220Y, ECO200Y/202Y.
- COM450H Management Policy and Strategy
  Choice of corporate purposes and definition of needs, the mobilization of resources and moulding of organizational character for the attainment of goals. Analysis of the conditions for the survival and growth of the corporation as it relates to (1) external environmental threats and opportunities, and (2) the assessment of internal strengths and weaknesses. *Prerequisite*: COM337Y. *Corequisite*: COM350Y.

# **COMPUTER SCIENCE**

Faculty Advisor: Professor G.S. Graham

Computer Science is concerned with the use of computers to process information. A modern computer is expected to process many kinds of information: business accounts and records, scientific calculations for engineering and the physical sciences, natural language text for linguists. Computer Science includes the identification of classes of problems that can be solved using computers, the study of ways of representing the relevant information in computer usable form, and the investigation of how best to describe solutions in terms of the operations that computers can perform.

A fundamental concept in Computer Science is the algorithm - a list of instructions which specifies the steps required to solve a particular problem. Two major concerns in Computer Science are the analysis of problems, frequently using the tools of mathematics and statistics, and the formulation of algorithms to solve particular classes of problems. Other areas of interest include the transformation of abstract algorithms into computer programmes, and the testing and validation of algorithms and programmes. Closely related to these areas are efforts to develop tools for designing better computers and for using them more effectively.

Course offerings are intended to serve a wide variety of students, ranging from those whose primary interest is in information processing, to those interested in applying computers in other fields. The specialist programme in Computer Science is designed to provide a student with the knowledge and skills needed to hold professional positions in the computer field and to prepare the student for graduate study. The specialist programme in Computer Science for Data Management is intended for students who plan to pursue a career in information systems development, an area of increasing importance to business, industry, and government. From this programme a student may also continue with graduate study in Computer Science. If certain optional courses in the Faculty of Management Studies, or their equivalents in Commerce, are taken in the third and fourth years, a student in this programme may qualify for advanced standing toward the MBA degree. The major or minor programme in Computer Science may be taken by students in other areas such as the humanities, social sciences, life sciences, or physical sciences.

NOTE: Because of limited resources, enrolment in the Specialist and Major Programmes is restricted. Cetain courses may have restricted enrolment as well.

Data Management students may also be interested in taking COM422Y in their third or fourth year.

Students who wish to study computing primarily in order to use computer techniques in their own specialties should begin with CSC139H and CSC118H/158H. A number of applications courses are then available in the second and later years. CSC351H is recommended for science students. CSC218H(G) and 300H(G) are other possibilities.

Students who are anticipating a career in secondary school teaching should select several courses from the following: CSC139H/149H, 118H/158H, 228H, 248H, 257H, 300H(G), 351H, 356H.

CSC139H is equivalent to CSC201H(G) and to CSC148H(G). CSC118H is equivalent to CSC202H(G). CSC356H is equivalent to CSC334H(G) and to CSC378H(G).

For more information on the Programmes obtain a copy of the Computer Sciencse Undergraduate Student Handbook from Room 4037.

Please see Section 7 for details of Programme Requirement.

NOTE

No late registration is permitted in any CSC course after the first two weeks of classes. Students may change from highter-level to lower-level introductory courses until October 15th (first term) or February 15th (second term).

Enrolment in many CSC courses above 100-level is restricted. Students should consult the Calendar Supplement and the Department Handbook for details.

CSC118H Programming Applications
A continuation of CSC139H, but at a less intensive level than CSC158H. Survey of the uses of computers. Applications of computers in areas such as data processing, simulation, numerical calculations, and nonnumeric information processing. Exclusion:

CSC158H, 202H(G). Prerequisite: CSC108H(G)(as given before 1979-80)/139H/148H(G)/149H/201H(G).

CSC139H Introduction to Computer Programming

Introduction to algorithms and problem solving with computers. Programming in a high-level language, such as PL/I. Structured programming. Introduction to computer organization and assembly language. Some nonnumeric applications. Exclusion: CSC108H(G)(as given before 1979-80), 148H(G), 149H, 201H(G). Prerequisite: Grade 12 Mathematics.

CSC149H Programming Techniques and Style
An advanced treatment of CSC139H topics, intended for students with prior programming experience, e.g., one year at the high school level. Principles of good programming style; design of correct and understandable programmes. (The normal follow-up to CSC149H is CSC158H. However, students whose performance in CSC149H is excellent may take any second year CSC course concurrently with CSC158H, with permission.) Exclusion: CSC108H(G)(as given before 1979-80), 139H, 148H(G), 201H(G). Prerequisite: Grade 13 Mathematics R&F and C, previous programming experience. Corequisite: MAT132Y/138Y.

CSC158H Computer Applications
A continuation of CSC139H or CSC149H, but at a more intensive level than CSC118H.
Elementary numerical methods. Some techniques of data processing. Construction and validation of computer simulation models. Representation and manipulation of graphs, games, computer graphics, and text editing. Exclusion: CSC118H, 202H(G). Prerequisite:
Grade 13 Mathematics R&F and C, CSC139H/148H(G)/149H. Corequisite:
MAT132Y/138Y.

CSC228H Principles of Data Processing Systems

26L, 13T

This course covers the hardware, software, management and performance aspects of data processing systems. The emphasis is on the techniques required to successfully choose, develop and manage data processing software. Topics include: data processing hardware and software environment; data storage and management; file processing; sorting; project management; documentation; requirements analysis; programme design; programming environment. The focus will be on the application of these techniques in a large, centralized data processing system environment. Prerequisite: CSC158H/80% in CSC118H.

CSC248H Programming Languages 26L, 13T Introduction to programming language concepts and features. Introduction to formal description of syntax. Language facilities for list processing and string manipulation. Control structures. Batch and interactive computing. Concepts of applicative programming. Introduction to proving programme correctness. Prerequisite: CSC158H.

CSC257H Computer Organization(Formerly CSC258H) 26L, 13T Computer structures, machine languages, instruction execution, addressing techniques and digital representation of data. Computer system organization, memory storage devices, micro-programming. Block diagram circuit realizations of memory, control and arithmetic functions. Some case studies of actual machines to illustrate various computer architectures. Exclusion: CSC258H. Prerequisite: CSC158H.

CSC348H Introduction to Algebra and Algebraic Computing
A universal algebra approach to the structures of modern algebra, with a view to applications to computer science. The emphasis is on rings and groups; in particular, the ring of integers (i.e., number theory) and the ring of polynomials over a field. Exclusion: MAT240H(G)/300Y(G). Prerequisite: MAT228H.

CSC351H Numerical Analysis

26L, 13T

An introduction to the analysis of basic methods for solving non-linear systems of equations, approximation, quadrature, and the solution of ordinary differential equations. The emphasis will be on the analysis and use of methods, rather than on implementation. *Exclusion*: CSC336H(G). *Prerequisite*: CSC158H, MAT228H, 234Y/235Y/239Y.

CSC356H

**Topics in Data Processing and Information Structures** 

26L, 13T

Searching and sorting algorithms, retrieval and update algorithms. The representation and application of data structures in these and other algorithms. Information management systems. *Exclusion*: CSC334H(G), 378H(G). *Prerequisite*: CSC228H/(248H and 257H).

CSC364H

**Effective and Efficient Computing** 

26L, 13T

Introduction to the Theory of Computation: computable functions, Turing machines, recursive and primitive recursive functions, unsolvable problems, and Church's thesis. Introduction to Logic: propositional calculus, predicate calculus, and programme correctness. Introduction to Complexity Theory: models of computation, classes P and NP, techniques for efficient algorithms, NP-complete problems, and heuristic algorithms. *Prerequisite*: CSC348H/MAT228H/234Y/235Y/239Y.

CSC368H

Language Processors

26L, 13T

Compiler organization, compiler writing tools, use of regular expressions, finite automata and context-free qrammars, scanning and parsing, runtime organization, semantic analysis, implementing the runtime model, storage allocation, code generation. *Exclusion*: CSC344H(G)(as given before 1979-80). *Prerequisite*: CSC248H, 257H, 356H.

CSC492H

Computer Science Implementation Project

This half-course involves a significant implementation project in any area of Computer Science. The project may be undertaken individually or in small groups. The project is offered by arrangement with a Computer Science faculty member. *Exclusion*: CSC494H(G), 495H(G). *Prerequisite*: At least three 300-level CSC half-courses and permission of the Discipline Representative.

CSC493H

Computer Science Expository Work

This half-course involves a significant literature search and expository work in any area of Computer Science. This work must be undertaken individually. It is offered by arrangement with a Computer Science faculty member. *Exclusion*: CSC494H(G), 495H(G). *Prerequisite*: At least three 300-level CSC half-courses and permission of the Discipline Representative. *Recommended preparation*: INE203H.

#### DRAMA

Faculty Advisor: Professor J. H. Astington

The study of drama invites the student to consider a form of art as old as man. Facilities at Erindale provide opportunities for a full and varied exploration of the nature of drama: courses in dramatic literature, theatrical history, and theatre practice enable the student to experience a number of different approaches to understanding. An equipped Studio Theatre is available for rehearsal and performance. NOTE: This programme does not correspond with the programme offered by University College.

Please see Section 7 for details of Programme Requirement.

DRM120Y

Drama on the Stage

52L, 26S

Through the study of between eight and ten plays from the Greek through to the modern theatre the course will consider original conditions of staging and performance, and examine how historical knowledge might be applied to productions of the plays today. *Exclusion:* DRM110Y. *Recommended preparation:* Grade 13 English.

DRM200Y Acting I

104P

Basic areas of acting technique in speech and movement; problems of portrayal of character; phenomena of theatrical communication (actor to actor, actor to audience, and "feedback") and techniques for their control. Students will be expected to participate in public productions and to prepare for classes as for rehearsal (line learning, research).

DRM300Y

Acting II (Offered in alternate years)

104P

Detailed work on acting technique and the interpretation of the play text. Students will be expected to work on their own to a considerable extent, in preparation of scenes for group discussion, and to work on productions arising from the course. The work of DRM200Y will be continued in a more advanced and intensive way. *Prerequisite*: DRM200Y or equivalent.

#### **EAST ASIAN STUDIES**

Faculty Advisor: Professor R.W. Van Fossen

EAS290Y

Chinese Language for Non-Mandarin Speakers I

26P, 52S

For students who speak a Chinese dialect other than Mandarin and have acquired a basic knowledge of written Chinese. Gives basic knowledge of spoken Mandarin and ability to read both literary and modern texts. Language laboratory work mandatory. *Prerequisite*: Permission of Department.

#### **ECONOMICS**

Faculty Advisor: Professor M.J. Hare

Economics is a social science; that is, it is an exploration of the behaviour of people in society. It has a strong influence on the structure, well-being and development of a society. More specifically, Economics studies the ways in which the resources of a country (capital, labour, land and natural resources) are allocated between industries to efficiently produce the range of goods and services provided in the country each year. The decisions of what to produce, of production methods, and how to distribute the goods and services provided must be made in each country irrespective of the political organization of the government in that country. Allocative decisions are made according to traditional patterns and customs; by government decree, policies and planning, and finally by the allocative mechanisms inherent in the price system.

At the aggregate level, Economics considers such problems as the excessive levels of unemployment and inflation in the Canadian economy, and analyzes policies which can mitigate these burdens. The study of Economics also assesses the fairness of the tax burden, and the degree to which government spending can be justified. At a more micro or disaggregated level, economic analysis considers the determination of economic efficiency in different types of industry (e.g. oligopoly, and pure competition); the impact of anti-trust regulations, and the determination of prices of both outputs and inputs through the forces of supply and demand. Economic assessments of international trade patterns, tariffs and the consequences of foreign direct investment are also integral.

In addition, economic analysis focuses on such issues as pollution, poverty, the rate of economic growth and urbanization, regional disparities, custom unions and energy analysis, topics which are ubiquitous in today's newspapers.

The course sequence in Economics at Erindale is intentionally designed to accommodate the interests of students who wish to specialize in this discipline, and concomitantly, those who wish a broader assessment.

Students who wish to concentrate in Economics may proceed into the Four Year "specialist programme" in Economics; into the Programme in Commerce and Finance, an internationally acknowledged joint major in Commerce and Economics which is offered at Erindale College, or into several combined "specialist programmes" such as Economics and Political Science. Combined "specialist programmes" are expected to be developed with Economics and History, Geography, Philosophy as well as with other disciplines. In addition, a Major and a Minor Programme are offered in Economics. Supplementary information will be available from the Departmental Office for Economics at Erindale.

Students who concentrate in Economics frequently continue into graduate work in Business or Economics, or proceed into Law, Chartered Accountancy and many other areas of industry and government. Scientists, doctors, musicians and even potential astronauts who have been exposed to a series of courses in Economics develop a more sophisticated comprehension of the principal economic issues which confront society. Concomitantly those who have been exposed to a hard-core diet of rigorous economic analysis will find that it enhances their decision-making processes.

First year preparation includes ECO100Y, and either MAT132Y or MAT138Y.

The enrolment in most Economics courses above the 100-level (and therefore, in all Economics programmes) may be restricted. Academic performance requirements (enrolment criteria) are necessary for ECO200- and 300-level courses. ECO220Y/STA242Y (but not STA202H and 212H) is required for most ECO300-level courses. Students should consult the Calendar Supplement and the information bulletins (available from the Departmental Office at Erindale) which set out the course enrolment criteria.

Please see Section 7 for details of Programme Requirement.

NOTE

The enrolment in most Economics courses above 100-level (and, therefore, in all Economics Programmes) is restricted. Students must consult the Calendar Supplement and the Depart-ment for details.

Not all courses are offered each year.

ECO100Y

## Introduction to Economics

78L, 26T

A survey course with emphasis on the basic concepts and techniques of macro and micro economic theory. The concepts introduced will include: national income and its determination; monetary and fiscal techniques; the derivation and use of supply and demand schedules; the theory of the firm; and principles of comparative advantage and foreign exchange fluctuations.

NOTE: Academic performance requirements are necessary as a condition for enrolment into ECO200-level courses. (See Economic Enrolment Criteria details at the Departmental Office at Erindale and prerequisite information listed below for ECO200-level courses.)

ECO200Y

## Microeconomic Theory

52L

An intermediate treatment of the basic tools of economic analysis with applications to a wide variety of economic problems in the area of pricing, resource allocation, income distribution, and welfare economics. Intended primarily for students in the Economics Minor and Major programmes. *Exclusion*: ECO206Y, 210Y. *Prerequisite*: ECO100Y with at least C minus.

ECO202Y

#### Macroeconomic Theory and Policy:

52L

Macroeconomics, monetary economics, economic stabilization, capital markets and international monetary economics. Theory of output, employment and the price level; techniques for achieving economic stability; central banking and Canadian financial institutions and markets; foreign exchange markets. Intended primarily for students in the Economics Minor and Major programmes. *Exclusion:* ECO208Y, 212Y. *Prerequisite:* ECO100Y with at least C minus. *Corequisite:* MAT132Y/138Y.

ECO203Y

# Modern European Economic History

52L

The economic development of modern Europe, with emphasis on the industrialization process and agrarian change in major European countries with concentration on the period from 1750 to 1939. *Prerequisite:* ECO100Y with at least C minus. *Exclusion:* ECO101Y/201Y.

ECO206Y Microeconomic Theory
This course deals more rigorously with the material included in ECO200Y and is intended primarily for students in the Economics Specialist programme and for students in the Commerce and Finance (B.Com.) programme who have the prerequisites. Exclusion: ECO200Y/210Y. Prerequisite: ECO100Y with at least B minus and MAT132Y/138Y.

ECO208Y Macroeconomic Theory 52L
This course deals more rigorously with the material included in ECO202Y and is intended primarily for students in the Economics Specialist programme and for students in the Commerce and Finance (B. Com.) programme who have the prerequisites. Exclusion: ECO202Y/212Y. Prerequisite: ECO100Y with at least B minus and MAT132Y/138Y.

ECO220Y

Quantitative Methods in Economics
An introduction to the use of statistical analysis, including such topics as elementary probability theory, sampling distributions, tests of hypotheses, estimation; analysis of variance and regression analysis. Emphasis is placed on applications in economics and business problems. *Prerequisite*: ECO100Y with at least C minus and MAT132Y/138Y. *Exclusion*: STA202H, 212H, 242Y, GGR202H, 212H, PSY200H, 201H.

ECO221Y Canadian Economic History Since 1500 52L Canadian economic growth and development from the sixteenth century to the present. Reference to relevant topics in United States economic history, especially during the colonial period. Exclusion: ECO222Y. Prerequisite: ECO100Y with at least C minus.

ECO222Y Canadian Economic Development Since Confederation 52L
Development of the Canadian economy; effect on Canada of the development of the
United States and of the international economy. Exclusion: ECO221Y. Prerequisite:
ECO100Y with at least C minus.

ECO244Y Industrial Relations
The role, structure, and performance of industrial relations within the framework of Canada's socio-economic-political system. Growth and history of the Canadian Labour movement: its philosphy and structure. Management's strategies and tactics in collective bargaining; public policy in the field of industrial relations; strikes in so-called emergency situations: the role of unions and collective bargaining in inflation.

ECO311H Government Policy Toward Businsess
(A continuation of ECO366H)
Government policies affecting the private sector; possible improvements in current policies. Emphasis on competition and anti-combines policy, the regulated industries, the patent system, externalities and market failure, and the industrial implications of tariff policy. Exclusion: ECO310Y. Prerequisite: ECO366H, ECO220Y/STA242Y.

ECO312H Economics of Public Regulation 26L
The efficiency and equity aspects of the regulation of public utilities. Economic theory, finance, politics, empirical evidence, and administrative law. The recent deregulation movement. *Prerequisite*: ECO200Y/206Y, ECO220Y/STA242Y.

ECO314H Energy and Resource Economics

The use of economic tools in problems of resource management, sharply rising prices for many resources especially energy, embargoes on oil shipments, and nationalistic debates about pipelines; the utilization of Northern gas reserves and the social profitability of exports. Development of conservation and the principles of finite resources; world events and Canadian policy within the framework of microeconomic analysis. *Prerequisite*: ECO200Y/206Y, ECO220Y/STA242Y.

ECO315Y Analysis of Canadian Economic Problems

The application of economic analysis to issues in Canadian public policy. Topics are analyzed with respect to efficient production, foreign ownership, natural resources, stabilization policy, and distribution of income, within the context of a federal state and an open economy. Prerequisite: ECO200Y/206Y, 202Y/208Y, ECO220Y/STA242Y.

26L

ECO317H **Economics of Transportation** 

26L Implications of public sector participation for pricing policy; alternative pricing principles and policies, modification of traditional cost theory and concepts for transport cost analysis, and theory of congestion. Empirical analyses and examples from industrialized and developing economies. Prerequisite: ECO200Y/206Y, ECO220Y/STA242Y.

ECO320Y

An Economic Analysis of Law 52I. This course will examine the economic basis for the law. The material will include an analysis of liability rules, including no-fault systems, workmen's compensation, consumer protection legislation, and medical malpractice. The appropriate economic measures of damages in tort cases will be discussed. Property rights will be considered in depth. Other topics include contracts, family law, the corporation, crime as an occupation, and law enforcement. Prerequisite: ECO200Y/206Y.

**History of Economic Thought** ECO322Y

52L. This course analyzes the development of economic thought in the eighteenth and nineteenth centuries, concentrating on the writings of Adam Smith, David Ricardo, J.S. Mill, Karl Marx, and the "Marginalists". Important methodological questions regarding the possible relationships between economic theories and economic events, and between time and knowledge, are raised and lead to a general assessment of alternative methodologies for interpreting the history of economics. *Prerequisite*: ECO200Y/206Y, ECO202Y/208Y.

ECO324Y **Economic Development** 

Emphasis is on the economic conditions of low-income countries and the prospects of their economic transformation. Frequent reference will be made to specific issues affecting the nations of Africa, Asia and Latin America. Prerequisite: ECO200Y/206Y; ECO202Y/208Y, ECO220Y/STA242Y.

ECO325H Advanced Economic Theory - Macro

26L To develop analytical skills in construction and solving macro-economic models. Prerequisite: ECO208Y, ECO220Y/STA242Y.

ECO326H Advanced Economic Theory - Micro

Focuses on theories and techniques of decision-making by firms and households. It examines the problem of measuring economic welfare, and the merits and shortcomings of the market mechanism in promoting it. Prerequisite: ECO206Y, ECO220Y/STA242Y.

ECO327Y **Applied Econometrics** 

52L The development and application of those statistical techniques that are used in the testing of the implications of economic theory. Prerequisite: ECO200Y/206Y, ECO202Y/208Y, ECO220Y/STA242Y.

ECO330Y **Economy of the USSR** 

52L Analysis of plan operation, investment decisions, price system, industry and management, labour and wages, money and finance, agriculture, transportation and spatial planning, and foreign trade. Measurement and evaluation of performance (income distribution, growth, efficiency) from viewpoints of developed and under-developed economies, as well as Marxist ideology. Prerequisite: ECO200Y/206Y.

ECO333Y **Urban Economics** 52L.

The purpose of the course is two fold. To analyse the effects of government policies for regulating markets in urban areas using such examples as zoning, land speculation, rent control and strategies for pollution control. To evaluate current and proposed methods of providing and financing urban services including discussion of such topics as metropolitan government pricing of transportation services and the effect of the property tax. Prerequisite: ECO200Y/206Y, ECO220Y/STA242Y.

ECO336Y Canadian Public Finance

52L

The construction of an economic theory of government to explain the determination of the budget and to provide an economic rationale for government intervention; an analysis of changing patterns of expenditure and revenue of federal and provincial governments; the development of criteria for the evaluation of expenditure programmes and the tax structure; the problems and techniques of fiscal stabilization. *Exclusion*: ECO236Y, 345H. *Prerequisite*: ECO200Y/206Y; ECO202Y/208Y; and ECO220Y/STA242Y.

ECO341Y Social Choice and Economic Policy

52L

The conceptualization of choice and the patterns of decision-making in the area of economic policy formation. The problematics of collective choice, public finance applications. Market and plan, principles and designs of economic policy, normative economics, and the logic of decision-making. *Prerequisite*: ECO200Y/206Y, ECO202Y/208Y.

ECO348H Monetary Economics and Stabilization Policy

261.

Theoretical foundations and empirical studies of monetary analysis and policy: the channels relating money, interest rates, prices and economic activity as the basis for assessing the role of monetary policy in stabilization policy. *Prerequisite*: ECO200Y/206Y, ECO202Y/208Y, ECO220Y/STA242Y.

ECO350Y Seminar on Selected Subjects

52L

Offers a seminar in a different subject each year. Students require permission of the instructor in addition to minimum prerequisites published for each seminar. *Exclusion*: ECO351H, 352H.

ECO351H/352H Seminar on Selected Subjects

26L

Offers a seminar in a different subject each year. Students require permission of the instructor in addition to minimum prerequisites published for each seminar. *Exclusion*: ECO350Y.

ECO360Y Economic Transformation and Technological Change

52L

To examine the economic transition in the industrial countries during their periods of industrialization. Emphasis is placed on the forces behind technological change; on the environmental consequences of industrialization and on contemporary problems such as energy resource allocation. *Exclusion*: ECO313H. *Prerequisite*: ECO200Y/206Y, ECO202Y/208Y, ECO220Y/STA242Y.

ECO361H Economics and the Labour Market

26L

26L

The supply and demand for labour, labour mobility, patterns of unemployment and the operation of labour markets are analyzed. *Exclusion*: ECO339Y. *Prerequisite*: ECO200Y/206Y, ECO220Y/STA242Y.

ECO362H

Labour Economics and Labour Relations (A continuation of ECO361H)

Examines the economic aspects of trade unions and the effect of collective bargaining on earnings. Relationships between labour market conditions and the size of wage bargains are studied. The determinants of wage differentials and government manpower and educational policies are also considered. *Exclusion*: ECO339Y. *Prerequisite*: ECO361H.

ECO363Y

**Modern Economic Institutions** 

52L

The economic analysis of modern economics from an institutional perspective. Topics will include the institutional foundations of the contemporary economies of Great Britain, Canada and the United States, West Germany, Sweden and Japan. Another principal theme is the relationships between plans and markets in the USSR, Eastern Europe and Yugoslavia. Finally, the interactions between traditions, markets and socialistic practices in East Africa will be examined. *Prerequisite*: ECO200Y/206Y.

ECO364H

International Trade Theory(Formerly part of ECO328Y)

201

An analysis of the nature, effects and policy implications of international trade theory; the theories of comparative costs and reciprocal demands, factor reward equalization, international tariffs and customs unions. *Exclusion*: ECO328Y. *Prerequisite*: ECO200Y/206Y; 202Y/208Y and ECO220Y/STA242Y.

26L

## ECO365H International Monetary Economics

(A continuation of ECO364H)

An analysis of the nature, effects and policy implications of international finance; balance-of-payments, and foreign exchange analysis; liquidity problems and related topics to current problems in international finance. *Exclusion*: ECO328Y. *Prerequisite*: ECO200Y/206Y, 202Y/208Y, ECO220Y/STA242Y.

## ECO366H Principles of Industrial Organization

26L

The allocative implications of market failure and the operation of oligopolistic and imperfectly competitive markets. Measures of industrial concentration and other dimensions of market structure; models of firm behaviour in different market settings; case studies of particular industries. *Exclusion*: ECO310Y. *Prerequisite*: ECO200Y/206Y, ECO220Y/STA242Y.

#### ECO367H Welfare Economics

26L

The basic ideas of welfare economics - especially Pareto efficiency and the question of the significance of Pareto efficiency - will be examined. Then a few particular topics (such as the economic implications of property rights; consumer surplus; and compensation tests) will be studied more intensively. *Prerequisite*: ECO200Y/206Y.

#### ECO368H Economics of Poverty

26L

Economic influences on the extent of inequality and poverty in Canada will be examined. These will include aggregate income levels, unemployment, inflation, regional development, education, low wage employment and discrimination. Canadian policies that affect the incidence of poverty are evaluated, and proposed programmes are critically analyzed. *Exclusion*: ECO340Y. *Prerequisite*: ECO200Y/206Y.

## ECO369H Advanced Economic Theory - Macro II

20L

A critical survey of contemporary issues in macroeconomic theory, concentrating largely on the methodological problems involved in explaining current aggregate phenomena (e.g. persistent inflation and unemployment, the short-run business cycle). The role of informational and institutional variables in macro-models will be considered, as well as the relationship between macro-models and their micro foundations. This course is intended to supplement the analysis in ECO325H. *Prerequisite*: ECO220Y/208Y, ECO220Y/STA242Y.

#### ECO371H The Economics of Natural Resources

26L

The purpose of this course is to provide students with a basic understanding of the theory of natural resource use. Also highlighted are the most pertinent policy issues concerning the use of natural resources, with special reference to Canada and the United States. Exclusion: ECO426H. *Prerequisite*: ECO200Y/206Y. ECO220Y/STA242Y.

## ECO372H

Game Theory and Economic Strategy

Reading Course, Seminar or Workshop

26L

This course will develop the basic concept of noncooperative games in extensive and normal form. The level of exposition will be comparable to the of *Games and Decisions* by Luce and Raiffa. The emphasis will be on developing an intuitive grasp of the concepts and the relationship between these concepts and strategic situations encountered in economics and other contexts. *Prerequisite*: ECO200Y/206Y, ECO220Y/STA242Y.

## ECO420Y

TBA

Primarily for advanced Specialist Students. Open only when a faculty member is willing and available to supervise. Students must obtain the written approval of the Discipline Representative before enrolling.

#### ECO421H/422H Reading Course, Seminar or Workshop

TBA

Primarily for advanced Specialist students. Open only when a faculty member is willing and available to supervise. Students must obtain the written approval of the Discipline Representative before enrolling.

ECO430Y Thesis I

TBA

Intended for students in the Economics Specialist programmes. Open only when a faculty member is willing and available to supervise. Students must obtain the written approval of the Discipline Representative before enrolling.

ECO431Y

Thesis II

TBA

Prerequisite: ECO325H, 326H, 327Y. Corequisite: ECO430Y.

#### **ENGLISH**

Faculty Advisor: Professor I. Lancashire

The Department of English offers a wide range of courses. Whether an individual course provides a knowledge of one author or one genre or an entire period, its aim is to deepen the student's awareness and appreciation of a distinguished literary tradition.

Courses are arranged in four series. This gradation denotes the level of work expected in the classroom. Thus, courses in the 100 series are introductory; the 200 series provides courses at an intermediate level; and more advanced courses appear in the 300 and 400 series. Although prerequisites are required for courses beyond the 100 series, students in other disciplines have a wide choice of courses. (Students from outside the Faculty wishing to take English courses should consult the Associate Chairman of the Department.)

The Specialist Programme outlined below provides the student with the opportunity to become acquainted with a range of authors, periods, and critical approaches. The Specialist Programme is not designed especially for entrance into Graduate School; therefore, students contemplating further degrees should consult their instructors about graduate school requirements, including the customary language requirements. Similarly, students considering a teaching career in Ontario should consult the Faculty of Education about the requirements for Type A certification.

The student who desires information beyond what is set forth in this Calendar may obtain a brochure from the English office (Room 235, North Building) or from the Department of English on the St. George Campus. This describes the content of courses in fuller detail and supplies lists of texts suggested by the individual instructors. Counselling is available from the Faculty Advisor as well as from other members of the English Faculty.

The 100-series courses are designed to introduce students to English studies at the university level and to develop their skills in critical reading and writing. The range of subject matter is broad, but all courses have certain aims and methods in common. Each course will include works of poetry, fiction, or drama; while these materials will be studied as individual literary achievements and in their relation to the general subject matter of the particular course, they will also serve to familiarize students with different literary forms and a variety of critical approaches. Each course will also be concerned to encourage the close and careful reading of literary texts and to provide an opportunity for students to develop their writing abilities. 100-series courses are open to all students with fewer than nine courses and to other students who have standing in no more than one course in English. The 200-series courses are open to all students who have completed at least four full courses and to those with fewer than four full courses completed who are taking at least one 100-series course in English. The 300-series courses are open to all students who have completed at least four full courses, at least one of which must be in English. The 400-series courses are open to students who have completed at least four full courses, at least one of which must be in English. The 400-series courses are open to students who have completed at least four full courses, at least one of which must be in English. The 400-series courses are open to students who have completed at least fine full courses.

Please see Section 7 for details of Programme Requirement.

ENG100Y Effective Writing

78L

An introduction to the writing of prose, dealing with organization, style, and usage, intended to improve individual writing skills and to develop a critical appreciation; of different types of prose. *Exclusion:* INE203H, 205H.

ENG108Y Forms of Twentieth-Century Literature

An introduction to the study of literature through at least ten but not more than twelve works by modern authors, including three dramatists, three poets, and three novelists. At least one work shall date from after 1960. The authors shall include: Shaw, Heartbreak House or Major Barbara; Beckett, Waiting for Godot or Endgame; poems by two of Yeats, Eliot, Stevens; Joyce, A Portrait of the Artist as a Young Man: Faulkner, As I Lav Dying or Light in August.

ENG112Y **Major British Writers** 

78L An introduction to the study of literature through a chronological consideration of no fewer than ten and no more than twelve works by major authors from the middle ages to the present day. Texts: Chaucer, the General Prologue to *The Canterbury Tales* and one tale; Shakespeare, Antony and Cleopatra; Milton, Paradise Lost, Books I & II, and IV & IX as selected in The Norton Anthology of English Literature; Congreve, The Way of the World or Shaw, St. Joan; two novels, at least one before 1900. In addition, no fewer than four of Spenser, The Faerie Queene, Book I; Donne, selections; Dryden or Pope, selections; Swift, Gulliver's Travels: Wordsworth or Keats, selections: Tennyson or Browning. selections; Yeats or Eliot, selections.

ENG165Y Major Forms of English Literature

781. An introduction to the study of literature through works representative of the genres (e.g., drama, poetry, and novel) and through an examination of various critical approaches to literary works. At least ten but not more than twelve works will be studied. Texts: Shakespeare, Hamlet or King Lear; Congreve, Love for Love or The Way of the World; selections from the poetry of Donne or Marvell; More, Utopia or Swift, Gulliver's Travels; selections from the poetry of Keats or Hopkins; Fielding, Joseph Andrews or Austen. Emma; Forster, A Passage to India or Faulkner, The Sound and the Fury. At least three more works, to extend the range of forms and make possible additional approaches.

ENG206Y **English Literature of the Renaissance** 

Poetry: Sidney, Spenser, Shakespeare, Donne, selected poems; Spenser, The Faerie Oueene, selections; selected poems by at least three of Jonson, Herrick, Herbert, Marvell, Vaughan and Milton (minor poems); Milton, Paradise Lost (selections). Drama: two or three plays. Prose: at least three of Sidney, Apology for Poetry, Bacon, Donne, Milton, Browne. Supplementary reading: two or more of More, Utopia, Erasmus, Praise of Folly, Machiavelli, The Prince, Castiglione, The Courtier and Montaigne, Essays.

ENG207Y **Nineteenth-Century English Literature** 

78L Selected works by at least ten writers illustrating the range and characteristics of English poetry, fiction, and prose in the nineteenth century. At least four authors from Scott, Jane Austen, Wordsworth, Coleridge, Byron, Shelley, Keats; and at least four from Carlyle, Newman, Mill, Tennyson, Browning, Thackeray, Dickens, George Eliot, Ruskin, Arnold, Meredith, Hardy. Not more than three novelists will be studied.

ENG212Y Shakespeare

78L Special study of not more than twelve plays by Shakespeare, including at least eight of the following: Romeo and Juliet; A Midsummer Night's Dream; Richard II; Henry IV, parts I and II; Henry V; Twelfth Night; Measure for Measure; Hamlet; King Lear; Antony and Cleopatra; The Tempest.

ENG225H **British Fiction Since 1960** 

39I. At least six works by at least four contemporary British novelists, such as Beckett, Burgess, Fowles, Golding, Lessing, Spark, Thomas.

ENG226H **American Fiction Since 1960** 39I. At least six works by at least four contemporary American novelists, such as Bellow, Doctorow, Hawkes, Mailer, Nabokov, Percy, Pynchon, Updike, Vonnegut.

ENG235H Drama in English Since 1960 At least ten plays by at least six contemporary British and American dramatists, such as Pinter, Albee, Stoppard, Orton, Bond, Storey, Mercer, Griffiths, Shaffer, Shepard, Sackler, Terry.

ENG250Y

American Literature

An introductory survey of major works in American literature through the study of approximately twelve representative writers. Works to be studied include: Hawthorne, 
The Scarlet Letter; James, The Portrait of a Lady; Melville, Moby-Dick; Thoreau, 
Walden; Twain, Adventures of Huckleberry Finn; selected poems by Whitman; a novel by 
Faulkner; selected poems by one of: Eliot, Frost, Stevens.

ENG252Y Canadian Literature in English
An introductory survey of Canadian poetry, prose, and drama. Texts: Moodie, Roughing it in the Bush; Ross, ed., Poets of the Confederation; Leacock, Sunshine Sketches; works by five of Grove, Callaghan, MacLennan, Ross, Laurence, Davies, Richler, Munro; poems by three of Pratt, Smith, F.R. Scott, Livesay, Klein, Birney; at least four other works, one of which must date from before 1900 and two of which must be plays.

NOTE: Special Studies

ENG259H, 262H, 263H, 264H and 265H are "special studies" half-courses that are offered for this Session, subject to the general regulations of the Department of English. The Department reserves the right to withdraw these courses.

ENG259H Children's Literature 39L
An historical and critical study of works written for or appropriated by children. At least twelve works chosen from prose, poetry, and drama will be read, including Pilgrim's Progress, Alice in Wonderland, Gulliver's Travels, Treasure Island, A Midsummer Night's Dream, The Wind in the Willows, Adventures of Huckleberry Finn, The Borrowers, The Hobbit, and nursery rhymes.

ENG262H The Detective Novel
A survey of the genre based on a selection of authors (who transcend the limitations of the formula), among them: Wilkie Collins, Dickens, Chesterton, Dorothy Sayers, Dashiell Hammett, Raymond Chandler, J.D. Carr, and Faulkner.

ENG263H Science Fiction (Offered in alternate years)

A survey emphasizing the genre as a vehicle for philosophical, political, religious, and ideological positions in the guise of entertainment. Among the authors studied will be: Poe, Verne, H.G. Wells, Olaf Stapledon, E.A. Abbot, Jack London, Huxley, Orwell, A.C. Clarke, and John Wyndham.

ENG264H Creativity and Technology 39L Introduction to the history of text-processing and text-generating technology such as memory systems, the scriptorium, the machine press, and the computer; to the effects that these have on general composition, creativity, and works by selected major authors; and to literature produced by artificial intelligence.

ENG265H The Short Story 39L
An introduction to fiction through short stories of various kinds, written mainly in the 19th and 20th Centuries. Authors include: Hawthorne, Poe, James, Conrad, Kipling, Joyce, Lawrence, Mansfield, Faulkner, Hemingway, Singer, Gallant.

ENG304Y English Poetry and Prose, 1600-1660 78L Poetry of Donne, Jonson and their successors; Milton. Prose from writers of the period (e.g. Bacon, Browne, Burton, Milton, Traherne).

ENG306Y

English Poetry, Prose and Drama, 1660-1800

Selections from the works of at least ten of the following: Addison, Boswell, Burke, Burns, Butler, Collins, Congreve, Cowper, Defoe, Dryden, Gay, Gibbon, Goldsmith, Gray, Halifax, Johnson, Pepys, Pope, Prior, Rochester, Sheridan, Smart, Steele, Swift, Thomson, Horace Walpole, Wycherley, Young; with particular attention to Dryden, Pope, Swift, and Johnson.

ENG308Y Romantic Poetry (Offered in alternate years) 78L Poetry and critical prose of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats; may include brief selections from other writers such as Crabbe, Scott, Landor, Clare. ENG312Y Chaucer 78L The Canterbury Tales; Troilus and Criseyde; selections from Chaucer's other works.

ENG317Y Major American Authors (Offered in alternate years) 78L A close study of works by four or five authors including one author before 1900 and one after; at least three of the authors will be chosen from the following: Emerson, Cooper, Dickinson, Hawthorne, Melville, Whitman, Twain, James, Eliot, Frost, Hemingway, Stevens, Faulkner. Exclusion: ENG218Y, 318Y, 319Y.

ENG322Y
Fiction Before 1832 (Offered in alternate years)
At least twelve works, including one or more by each of Richardson, Fielding, Sterne,
Austen, and Scott. Three of the works will be: Richardson, Pamela or Clarissa; Fielding,
Joseph Andrews or Tom Jones; Sterne, Tristram Shandy.

ENG324Y Fiction, 1832-1900 78L
At least twelve works, including one or more by each of Dickens, Thackeray, Trollope,
Emily Bronte, George Eliot, and Hardy.

ENG328Y Fiction, 1900-1950 78L
At least twelve works, including one or more by each of James, Conrad, Joyce, Lawrence, and Faulkner.

ENG332Y English Drama to 1642 (Offered in alternate years)

Examples of the miracle play, the morality play, the Tudor interlude, early Tudor and Elizabethan tragedy, comedy and romance; two or more plays by Marlowe; Shakespeare: at least seven of the following: Love's Labour's Lost, Richard III, Much Ado About Nothing, As You Like It, Troilus and Cressida, Othello, Macbeth, King Lear, Coriolanus, The Winter's Tale; two plays by Jonson; and a selection of works by at least six other Jacobean dramatists.

ENG334H Restoration and 18th-Century Drama 39L
At least twelve plays, including works by Dryden, Wycherley, Congreve, and their successors, chosen to demonstrate the modes of drama practised during the period, the relationship between these modes and that between the plays and the theatres for which they were designed.

ENG338Y Modern Drama 78L

A minimum of twenty representative modern plays; one or more by at least five of the following: Ibsen, Chekhov, Shaw, Synge, Yeats, O'Casey, O'Neill, Eliot, Beckett, Pinter.

ENG346Y Victorian Poetry 78L Special study of Tennyson, Browning, and Arnold; selections from Fitzgerald, Clough, C. Rossetti, D. G. Rossetti, Morris, Swinburne, Hopkins, Meredith, Hardy, Housman, or others. Selections from the critical writings of the period.

ENG348Y Modern Poetry (Offered in alternate years)
Special study of Hopkins, Yeats, Pound, Eliot, Stevens; selections from other poets.

78L

ENG356Y

Modern Canadian Fiction

A survey of the historical development and contemporary state of Canadian fiction in English. A minimum of fifteen works will be studied, including at least one by six of the following principal authors: Duncan, Leacock, Grove, Callaghan, MacLennan, Buckler, Lowry, Davies, Laurence, Richler, Munro, Atwood. A selection of short stories may be included.

ENG367Y

History of the English Language (Offered in alternate years)

78L

The English language from Old English to the present day. Emphasis on specific texts, showing how linguistic techniques can be used in the study of literature. Texts: Robert D. Stevick, English and its History; A. G. Rigg, The English Language: A Historical Reader.

ENG369Y Seminar in Writing

52S

Restricted to students who in the opinion of the Department show special aptitude. A section devoted to a workshop in play-writing and the analysis of plays will normally be available. *Prerequisite:* Permission of Instructor.

ENG390Y

**Individual Studies** 

TBA

A scholarly project chosen by the student and supervised by a member of staff. The form of the project and the manner of its execution will be determined in consultation with the supervisor. All project titles should be approved by the Associate Chairman by April 15, and none will be accepted after September 15. Proposal forms are available in Room 235 (North Building). *Prerequisite*: Three courses in English.

ENG391Y

Individual Studies

TBA

A project in creative writing chosen by the student and supervised by a member of the staff. The form of the project and the manner of its execution will be determined in consultation with the supervisor. All project titles should be approved by the Associate Chairman by April 15, and none will be accepted after September 15. Proposal forms are available in Room 235 (North Building). *Prerequisite*: Three courses in English, including ENG369Y.

ENG451Y

Studies in American Literature

52S

Prerequisite: Three courses in English, including one of ENG150Y, 218Y, 250Y, 317Y, 318Y, 319Y and 351Y.

ENG466Y

Comprehensive Studies

TBA

Supervised reading for three substantial examinations, one each on general literary history, practical and theoretical literary problems, and an area of the student's choice. *Prerequisite:* Open only to students who have obtained standing in at least fourteen full courses, at least three of which must be in English. Proposal forms are available in Room 235 (North Building).

ENG467Y

Seminar in Theory and Criticism of Literature

52S

For description consult Departmental brochure. *Prerequisite*: Normally *three* previous courses in English.

ENG469Y

Senior Essay

TBA

A scholarly project chosen by the student and supervised by a member of the staff. All project titles should be approved by the Associate Chairman by April 15, and none will be accepted after September 15. Proposal forms are available in Room 235 (North Building). *Prerequisite*: Open only to students who have obtained standing in at least fourteen full courses, at least three of which must be in English.

#### EARTH AND PLANETARY SCIENCE

(Geology and Geophysics)

Faculty Advisors: Professors H.C. Halls, I.H. Campbell, D.R. Kobluk, G.W. Pearce, P.-Y.F. Robin, R.M. Stesky.

Earth and Planetary Science is concerned with the origin, evolution and structure of the Earth and planets, through combined analysis of physical, chemical and biological processes. Recent theories of global dynamics and rapidly expanding horizons in lunar and planetary research are providing new insights into our understanding of the Earth's behaviour and of its relationship to other planets.

In society, the Earth Scientist plays two important roles; he searches for materials of economic value and evaluates potential hazards in our natural environment. The exploration and development of natural resources constitutes one of the largest and most fundamental industries in Canada, and has always been a major employer of earth scientists, either as geologists or geophysicists. For many years the occurrence of earthquakes, volcanic eruptions and other natural hazards have been monitored on a global scale. Recent advances in the understanding of these phenomena have enabled earth scientists to become more involved in seeking ways to predict or even control them.

A career in Earth Science may lead to work in many parts of the world, under a wide variety of field conditions. Laboratory studies are also needed to supplement field observations and often require the use of sophisticated analytical equipment.

Erindale offers a broad spectrum of courses in Earth and Planetary Science, encompassing the fields of geophysics, structural geology, sedimentology, petrology, stratigraphy, paleoecology, and paleontology. Three specialist programmes are presently offered, which may lead respectively to careers in Geology, Geophysics or Geochemistry. These programmes are outlined in Section 7 of this calendar; note that most fourth-year courses are taken on the St. George campus. Many courses offered in Earth and Planetary Science may be useful to students specializing in other fields such as Environmental Geography, Survey Science, Biology and Anthropology.

Please see Section 7 for details of Programme Requirement.

EPS100H The Restless Earth

26L, 14P, 7T

Suitable for students in Humanities and Social Sciences, it focuses on the structure and evolution of the Earth, its Moon, and other planets in the Solar system. Plate tectonics, and space missions to other planets have recently revolutionized our understanding of our own planet and its relation to its neighbours in space. *Exclusion*: EPS120Y.

EPS110H Man and the Earth

26L,26T

Emphasizes the impact of natural earth processes on human activity. Topics include: asteroidal impact with Earth, the monitoring, prediction and control of natural hazards such as earthquakes, volcanic eruptions and avalanches; the search for oil and mineral wealth. Suitable for students in Humanities, Social Sciences, Physical and Biological Sciences.

EPS115H Life and the Oceans

26L

An overview of the history of life and the oceans from the present back to approximately 3,500 million years. The main thrust is the marine ecosystem, animal and plant evolution in the oceans, and the relationships between organisms and the physical ocean environment throughout the history of life on earth. Suitable for students in Humanities, Social Sciences, Physical and Biological Sciences. *Recommended preparation*: High school Biology and/or Geography/Geology.

EPS120Y

**Introduction to Earth and Planetary Science** 

52L, 78P

The first term discusses planetary evolution and behaviour through examination of the shape, motion and internal constitution of the Earth and Moon, and the physical and chemical processes that control their surface and internal characteristics. The second term is an introduction to minerals, rocks and rock forming processes, geological ways and geological history. The course includes several field excursions in the Fall. It is recommended for science students with a serious interest in practical Earth Science. *Exclusion*: EPS100H, EPS119H. *Prerequisite*: Grade 13 MAT R&F, CHM/PHY/BIO.

EPS124Z Geology Laboratory

78P

This course consists of the laboratory section of EPS120Y. Those students who take EPS100H and who achieve a satisfactory mark will be eligible upon permission of the Department to enter EPS Specialist Programmes by taking EPS124Z. *Exclusion*: EPS120Y. *Prerequisite*: Any two of EPS100H, 110H, 115H.

EPS219H Mineralogy

26L, 39P

A course in mineralogy for students who wish to pursue careers in Earth Sciences and Geography. Lecture material covers the principles of mineralogy: crystallography, physical and chemical properties of minerals, their formation and occurrence; descriptive mineralogy of some 70 species. Practical work is devoted to crystal and mineral recognition. *Prerequisite*: EPS120Y/(EPS100H, EPS124Z). *Corequisite*: CHM118Y/150Y/P.I.

EPS221H Optical Mineralogy

26L, 39P

An introduction to optical mineralogy, the use of the petrological microscope, and the chemistry of natural minerals. *Prerequisite*: EPS219H. *Corequisite*: CHM118Y/150Y.

**EPS222H** Introduction to Rock Identification

26L,39P

A practical course in the identification of rocks from hand-samples. The lectures emphasize rock classification and description, and procedures for rock identification. Laboratory work includes the description and identification of named and unnamed rock specimens. *Prerequisite*: EPS219H.

**EPS236H** Introductory Global Geophysics

26L, 26P, 13T

An introduction to the methods of geophysics and physical geology as these are applied to our understanding of large scale features of the earth's crust, and of the structure of the earth's mantle and core. *Prerequisite*: EPS100H/120Y; MAT132Y/138Y; PHY118Y/140Y.

EPS237H

**Exploring the Solar System** 

26L, 13P

An examination of the recent great accumulation of knowledge of the sun, planets and other members of our solar system. The course will concentrate on the terrestrial planets Mars, Earth, Venus, and Mercury, because of our greater knowledge of these through numerous landing, orbiting and flyby observations. The asteroids, the giant planets and their satellites will be discussed particularly as they pertain to theories of the origin and evolution of the solar system. *Exclusion*: AST310H. *Prerequisite*: MAT132Y/138Y; one 100 level AST/CHM/EPS/PHY course.

EPS270H

Paleontology for Geologists

26L, 13P

The major groups of invertebrate organisms and marine plants preserved in the fossil record. Indentification of major fossil groups, basics of invertebrate paleoecology, and stratigraphic paleontology. *Prerequisite*: EPS120Y. *Recommended preparation*: EPS115H.

EPS320H

Igneous Petrology

26L, 39P

Principles of classification and interpretation of igneous rocks. Practical work emphasizes recognition and description of igneous rocks in hand specimens and petrographic thin sections. *Prerequisite*: EPS221H.

EPS321H

Metamorphic Petrology

26L, 39P

Principles of classification and interpretation of metamorphic rocks. Practical work emphasizes recognition and description of metamorphic rocks in hand specimens and petrographic thin sections. *Prerequisite*: EPS221H.

EPS322H

Structural Geology

26L, 50P, 13T

An introductory study of the deformation of rocks in the Earth's crust: tectonite fabrics, faults, and mechanisms of deformation of rocks under various conditions in the crust. Practical work consists of a one-day field trip to examine deformed metamorphic rocks in the Gravenhurst-Bala area, and of weekly laboratory sessions on graphical methods in structural geology. Tutorials are used to review and/or teach the essential concepts of continuum mechanics. *Prerequisite*: EPS200H/222H, 219H. *Corequisite*: PHY118Y/140Y.

EPS330H **Phase Diagrams For Geologists** 

39L Application of phase equilibrium to the study of minerals, rocks and ores. Topics include the phase rule, multi-component diagrams as applied to igneous rocks, systems under confining pressures, and reactions involving water, carbon dioxide, oxygen and sulfur relating to metamorphic rocks and ore deposits. Prerequisite: CHM118Y/150Y, EPS221H.

EPS332H Tectonics 26L, 39P, 13T

An examination of the principles of plate tectonics and the use of plate tectonic theory to help unrayel the development of the earth's crust. Topics include plate kinematics, driving mechanisms, processes at plate margins, orogeny, intraplate tectonics, and epeirogeny. Laboratory work emphasizes map interpretation and geological reconstruction. Prerequisite: EPS322H.

JGP334H

Physics of the Earth (See Joint Courses)

26L, 13T

A course dealing with the quantitative physical description of the earth, its dynamics, internal structure and tectonic history. Topics covered in detail are: radioactivity and radiometric dating of rocks; the rotation and dynamics of the earth; the earth's gravitational and magnetic fields; ancient magnetic fields; and seismological evidence for the internal structure and composition of the earth. Extensive use is made of potential field methods and solution of partial differential equations. Prerequisite: PHY231Y. Recommended preparation: EPS100H/120Y/236H.

EPS337H

**Exploration Geophysics I** 

26L, 39P

An introduction to the geophysical methods used in the search for mineral deposits. Basic principles, instrumentation, field procedures and elementary interpretation techniques are outlined for gravity, magnetic and seismic methods. Practical work will emphasize field surveys. Prerequisite: EPS200H/222H, 219H; PHY118Y/140Y.

EPS338H

**Exploration Geophysics II** 

A continuation of EPS337H with emphasis on electrical and electromagnetic methods. Practical work consists of laboratory exercises and experiments designed to simulate natural situations. For those students who have completed the course and EPS337H, a series of weekend field trips are available, arranged by the Geophysics Division on the St. George Campus, just prior to the beginning of the fall term. Prerequisite: EPS337H. Recommended preparation: PHY230Y.

EPS375H

Carbonate Rocks

26L, 39P

An examination of limestones, dolomites, and evaporites, emphasizing their identification, classification and interpretation. The course is a practical guide to carbonate sediments and rocks, to enable the student to deal with these rocks in both thin section and hand sample. Topics include: grain types, grain size and other grain parameters, classification, neomorphism, cementation, dolomitization, other diagenetic processes, and reef carbonates. Prerequisites: EPS200H/222H, 221H, 270H.

EPS376H

Clastic Rocks

The composition, textural characteristics and origin of terrigenous clastic rocks. Stratigraphy and correlation in clastic sequences. Applications of sedimentary petrology to resource and geotechnical evaluation. Prerequisite: EPS375F.

EPS4257.

Field Course

A 10 to 12 day mapping exercise. A fee, recently \$120.00, is charged to cover part of the cost of accommodation. The course is held immediately following the end of the Spring examination period. Prerequisite: EPS320H, 321H, 322H, 345H/376H.

EPS460H Seismic Stratigraphy

26L, 39P, 13T

An introduction to the application of reflection seismology to the study of crustal structure and stratigraphy and to the exploration for oil and gas. The emphasis will be on stratigraphic modeling and interpretation of seismic data. The practicals include computer modeling of reflection seismograms for various geological situations, laboratory measurement of seismic wave velocity, and interpretation of borehole logs and seismic sections from an area of active petroleum exploration. *Prerequisite*: PHY118Y/140Y. *Corequisite*: EPS322H, 345H/375H/376H.

**EPS470Y** Research Project

A student research programme under the supervision of the staff. Copies of typed reports to be submitted by April 1st. *Prerequisite*: Any 2 full course equivalents from the EPS300-series, plus a 75% average in the last 5 courses taken. *Exclusion*: EPS472H.

EPS472H Research Project

A student research programme under the supervision of the staff. Copies of typed report must be submitted one week prior to the end of term classes. *Exclusion*: EPS470Y. *Prerequisite*: P.I.

#### FINEART

Faculty Advisor: Professor B. Welsh

The study of works of art provides insight into the nature of the societies in which they were created; it is one of the ways of gaining understanding of human culture in general. More specifically, the creative process leading to the making of a work of art is a subject worthy of study in its own right. Students of Art and Art History (formerly Studio Art) attempt to comprehend and interpret this process through learning critical and research methods and through practice. The subjects of study are the visual arts: architecture, sculpture, painting and the minor arts. They also complement related disciplines, of which history, philosophy and literature are examples.

Specialization in Fine Art may lead to professional work in galleries or museums, teaching at the high school or university levels, careers in illustration and design, or independent artistic activities. For post-graduate work in the History of Art, a reading knowledge of French and German and, depending upon one's special area of interest, Italian, Latin or Greek is required. These languages can be obtained most easily during the undergraduate years.

Erindale College offers courses in both Art History (FAH) and Art and Art History (FAS), formerly Studio Art. The student may work toward a specialization or major in Art History or in Studio, the latter of which requires a component of Art History courses.

A special programme in Art and Art History, formerly Fine Art (Studio) is conducted in co-operation with Sheridan College of Applied Arts and Technology. After three years of the course the student will obtain a B.A. degree, with a major programme in Art and Art History, in preparation for entering the Type B Certificate course at the Faculty of Education, for further studies in art, or in preparation for a career. Credits in Art and Art History (Studio Art) are obtained by enrolling in those courses which are held at Sheridan College of Applied Arts and Technology. Selected students enroll for at least four credits in Art and Art History (Studio Art) during their degree programme. The remaining arts and science credits will be taken from the regularly scheduled courses offered by Erindale College, and it is required that minimum of two of these courses be in Art History. In order for the student to be eligible for a Type-A Certificate, a four-year degree, with a specialist programme in Art and Art History formerly Fine Art (Studio) is necessary with further work in Fine Art, at least seven FAS and four FAH courses. Those students completing the FAS requirements simultaneously receive the Art and Art History Diploma offered by Sheridan College.

It should be noted that many of the courses at Sheridan College are half courses, albeit taken in 3-hour weekly sessions throughout the whole of the school year (total 78 hours for each half course). Eight of these half courses must be taken in order to complete four full year credits.

Students who wish to complete their programmes at the St. George Campus must apply to the Department of Fine Art, where each application will be judged on an individual basis.

Students who seek to enter the Art and Art History formerly Fine Art (Studio) Programme or to specialize in Fine Art (History) are required to consult and enrol with the Faculty Advisor. A joint specialization in Fine Art and Urban Studies is also available. Interested students should consult the Faculty Advisors in both of these Disciplines.

In order to be eligible for enrolment in a Sheridan FAS course, students must meet the Prerequisite and/or Corequisite of the course; they must apply and register in person at Sheridan College, Oakville Campus.

FAH211H, 265H, 338H, 377H, 402H are offered by St. George Campus Staff on alternate years at Erindale.

Students registering in their first year in Fine Art and Art & Art History, must meet the Discipline Representative during registration period for guidance.

It is important that students read the entries relating to Fine Art in the section of the Erindale Calendar Programme of Study.

Counselling is available by appointment from:

Discipline Representative Erindale - B.M. Welsh (828-5283)

Undergraduate Secretary (FAH) St. George Campus, Michael McCarthy (978-3290)

Liaison person - Annie Smith (FAS) Sheridan College, Oakville Campus (845-9430).

FAH101Y Greek and Roman Art 78L

The art of Greece and Rome. The importance of architecture and the arts as characteristic expressions of their age. Detailed study of the outstanding monuments.

FAH102Y Mediaeval Art and Architecture

52L, 26T

A selective survey of the art of the Middle Ages. The study of Early Christian, Byzantine, and Early and Late Mediaeval art and architecture will be combined with a more general introduction to the language of visual expression and its interpretation.

FAH200Y

European Art from 1400 to 1750

52L, 26T

Major forms of expression in the visual arts - architecture, painting and sculpture - with special emphasis on visual analysis. Political, religious and general cultural movements. Recommended preparation: FAH101Y/102Y.

FAH210Y

European Painting and Sculpture from Neo-classicism to 1940

52L

A discussion of the major movements in European art. Exclusion: FAH208H, 209H, 283H.

284H. Recommended preparation: FAH200Y.

FAH211H

Architecture in the Western World Since the Birth Of Neo-Classicism

26L

(Offered in alternate years) A survey of principal developments in the history of Western architecture since the mideighteenth century. Recommended preparation: FAH200Y.

FAH256H

Ancient Rome (Offered in alternate years)

Development of the city of Rome, from early times to the Late Empire. Buildings and monuments and their place in the life of the ancient city. Readings in topography, art and architecture, and history.

FAH258H

Pompeii, Herculaneum and Ostia

26L

The public and domestic monuments of three ancient Roman communities, illustrating the daily life of the later Republic and the Empire, outside the capital city itself.

FAH265H The Mediaeval City (Offered in alternate years)

A study of the medieval city, seen within its intellectual, social and political context. The course will concentrate on the ground plans and on the forms and uses of public buildings, religious and secular, and of domestic architecture. Exclusion: FAH365H.

FAH268H The Gothic Cathedral

The architecture and decoration of the Gothic cathedral. Origins, evolution, and variety of forms; methods of construction; religious and liturgical uses; symbolic meanings; its mediaeval intellectual and social context.

FAH304Y

Piero della Francesca and His Followers

(Offered in alternate years)

An investigation into the sources and development of ideal space and forms in the paintings and writings of Piero della Francesca and his followers in Tuscany and Rome in the late 15th and early 16th centuries. Prerequisite: FAH200Y. Recommended preparation: A reading knowledge of Italian or French.

FAH312H Painting and Sculpture in the United States (Offered in alternate years) 26S
These arts in America since the late 17th century: their relationship to European traditions, the growth of distinctive national syles, and international interaction. Exclusion: FAH310Y. Prerequisite: FAH200Y/210Y/287H.

FAH315H Realism (Offered in alternate years)

An examination of this mid-nineteenth century movement in French painting and sculpture with particular emphasis on Courbet, Millet, the Barbizon School, Daumier and Manet. Pre or Co-requisite: FAH210Y/283H/301Y and P.I. Recommended preparation: A reading knowledge of French.

FAH319H The Expressionist Tradition in Twentieth Century Painting And Sculpture (Offered in alternate years)

A continuation of FAH318H, the course concentrates upon such twentieth century masters as Matisse, Kirchner, Kandinsky, Nolde, Arp, Miro and Pollock, Borduas and Riopelle. Pre or Corequisite: FAH210Y/283H/301Y and P.I. Recommended preparation: A reading knowledge of French or German.

FAH327H Giotto and Duccio (Offered in alternate years)

The position of these artists in the sequence of Italian painting, their masterworks in Padua, Florence and Siena seen in relation to the work of their predecessors and followers.

Exclusion: FAH326Y. Prerequisite: FAH102Y and P.I. Recommended preparation: A reading knowledge of Italian or German.

FAH328H Italian Mediaeval Sculpture (Offered in alternate years)

Selected topics in the history of Italian medieval sculpture, concentrating on the careers of the Emilian masters of the twelfth century and the Pisani in the thirteenth and early fourteenth. Exclusion: FAH326Y. Prerequisite: FAH102Y and P.I. Recommended preparation: A reading knowledge of Italian or German.

FAH330Y
Raphael and Michelangelo As Painters (Offered in alternate years)
An investigation of the late pictorial works of Raphael and Michelangelo which completed the decoration of the Sistine Chapel, and also of Michelangelo's Peter and Paul cycles in the adjacent Pauline Chapel. A study of High Renaissance Classicism. Prerequisite: FAH200Y. Recommended preparation: A reading knowledge of Italian or German.

FAH331H Fifteenth and Sixteenth Century Italian Sculpture (Offered in alternate years) 26S
The development of Renaissance sculpture from Ghiberti to Michelangelo, with an emphasis on the works of Donatello and Michelangelo. The impact of the latter's achievement on the succeeding generation of Mannerist sculptors such as Cellini, Ammanati and Sansovino. Prerequisite: FAH200Y. Recommended preparation: A reading knowledge of Italian or German.

Studies in Baroque Painting (Offered in alternate years) FAH332H

26S Its origins in Northern Italian painting and its subsequent manifestation in the aesthetic of Caravaggio, Annibale Carracci and their followers throughout Europe. Seventeenth century academies of art will also be considered. Prerequisite: FAH200Y. Recommended preparation: A reading knowledge of Italian or German.

FAH337H The Ideal City: Formal Problems in Central Plan Cities, Painting and Sculpture

268

(Formerly FAH336H) (Offered in alternate years)

The origin and development of central plan in paintings and architecture and of attempts to reconstruct urban environments in the Renaissance and Baroque periods; the theory underlying circular, Greek cross and oval plan structures; the extension of these plans to villas, palaces, city squares and plans, Prerequisite: FAH101Y/102Y/P.I. and FAH200Y. Recommended preparation: A reading knowledge of French, German or Italian.

Baroque Architecture in Italy (Offered in alternate years) FAH338H

26S

The origins and development of the Baroque style in architecture in the Italian peninsula, principally in Rome. Prerequisite: FAH200Y. Recommended preparation: A reading knowledge of Italian.

FAH365H The Mediaeval City (Offered in alternate years) 26L, 13T

See FAH265H for a description. Students taking the course as a third year subject will attend the lectures, participate in an additional weekly class and write a special paper. Exclusion: FAH265H. Prerequisite: FAH102Y and P.I.

FAH370H Gothic Architecture (Offered in alternate years) 26S

A study of the forms, uses and decoration of West European architecture between ca 1140 and ca 1400. Prerequisite: FAH102Y. Recommended preparation: A reading knowledge of French.

FAH402H International Art Since 1940 (Offered in alternate years)

Developments in the mainstream of Western painting and sculpture since World War II with special emphasis upon inter-relations among Europe, Canada and the United States. Prerequisite: FAH210Y/286H/310Y/312H/313H and P.I.

Portraiture from 1400-1750 (Offered in alternate years) FAH445H

Portraits of individuals of various social strata. Topics such as the social position of the artist as artisan or practitioner of the Liberal Arts; the aggrandizement of the prince and his dynasty in allegorical portraits; the female portrait as model of virtue, aesthetic and sex object; the male portrait as exemplar of leadership, image of impotency and self-doubt. Prerequisite: FAH101Y/102Y/200Y. Recommended preparation: SOC101Y. Knowledge of social history of the 15th-17th centuries. A reading knowledge of French, German or Italian.

FAH446Y Art and Literature (Offered in alternate years)

Consideration of various types of illustrative art, including illustrated texts and history and genre painting, and, where appropriate, of the relationship of text to picture. The problems chosen for study will be selected from the late antique to the modern period. Prerequisite: Any three Art History courses and P.I.

FAH480H/481H Studies in Ancient Art

Students who have demonstrated unusual ability in earlier years will be encouraged to undertake, under the supervision of one or more staff members, special research projects culminating in a major research paper. Not more than two half-courses in Independent Studies may be taken in a single year. Students must have written consent of their faculty supervisor(s) and the Undergraduate Secretary before registering. Prerequisite: Six FAH courses and permission of Chairman or Undergraduate Secretary.

# FAH482H/483H Studies in Mediaeval Art

The same course description and prerequisites as FAH480H/481H.

## FAH484H/485H Studies in Renaissance Art

The same course description and prerequisites as FAH480H/481H.

FAH486H/487H Studies in Baroque Art

The same course description and prerequisites as FAH480H/481H.

FAH488H/489H Studies in Modern Art

The same course description and prerequisites as FAH480H/481H.

# STUDIO ART COURSES (Taught at Sheridan College)

Co-ordinator of Art and Art History - Sheridan College: Dr. Annie Smith

In order to be eligible for enrolment in a Sheridan FAS course, students must meet the Pre- and/or Corequisite of the course and students must apply and register in person at Sheridan College, Oakville Campus.

FAS143H Drawing I 78P
An introduction to drawing media and techniques combining practice with analysis of draughtsmanship in stylistic and technical terms. Corequisite: One full FAH course.

FAS145H Painting I 78P
An exploration of various painting materials, discovering their characteristic properties as expressed in visual language. Exclusion: FAS230Y(G). Coreguisite: One full FAH course.

FAS146H Design I 78P
Fundamental concepts and design processes developed through manipulation and analysis of specific problems. *Corequisite:* One full FAH course.

FAS147H Photography I 78P
Emphasis on interaction of technique, perception, and communication in making and responding to photographic images: Covers necessary technical aspects of the medium and darkroom procedures. Corequisite: One full FAH course.

FAS232H Printmaking I

An introduction to relief and intaglio processes and materials encouraging experimentation and the exploration of contemporary visual concerns. Corequisite: One full FAH course or equivalent.

FAS234H Printmaking II 78P
Exploration of more advanced relief intaglio processes and materials, together with a deeper investigation of visual expression. *Prerequisite:* FAS232H. *Corequisite:* One full FAS course or equivalent.

FAS243H Analytical Drawing
An analytical and compositional drawing course based on natural form, man-made objects, and the figure; contemporary studio problems viewed against classical drawing traditions and visual conventions. *Prerequisite:* FAS143H. *Corequiste:* One full FAH course or equivalent.

FAS245H

Painting II

A continuation of FAS145H: to further expertise in major painting media and to further exploration of visual problems within the framework of 20th Century modes. Exclusion: FAS230Y(G). Prerequisite: FAS143H, 145H. Corequisite: One full FAH course or equivalent.

FAS246H Design II
A continuation of FAS146H: Problem solving activities encompassing the fundamental concepts of ratio and proportion are extended to include the heuristic, analogous and metaphoric aspects of the lateral thought process. *Prerequisite:* FAS146H. *Corequisite:* FAS248H and one full FAH course or equivalent.

FAS247H

Photography II

A continuation of FAS147H, this course further develops the use of the camera, light and light-sensitive materials for visual communication and personal expression. Investigations of historical and contemporary uses of the medium will emphasize both technical and aesthetic considerations. Prerequisite: FAS147H. Corequisite: One full FAH course or equivalent.

FAS248H Three-Dimensional Materials
This course explores the application of three-dimensional concepts through direct manipulation of both contemporary and traditional materials. *Prerequisite:* FAS146H. *Corequisite:* FAS246H and one full FAH course or equivalent.

FAS334Y Printmaking III
A continuation of FAS234H (Printmaking II) to further technical and aesthetic understanding of printmaking as a contemporary expression in the visual arts. Prerequisite: FAS234H.

FAS343Y Drawing III

A continuation of FAS243H; further development of graphic skill and concepts. Drawing may be considered an end in itself, a manifestation of an idea or concept, and preparation for work in another media. Prerequisite: FAS243Y and/or permission of the Department.

FAS345Y Painting III 78P
A continuation of FAS245H. Greater attention will be given to individual development in the perceptual and conceptual understanding of contemporary art. Exclusion: FAS331Y(G). Prerequisite: FAS245H.

FAS347Y

Photography III

An applied course in more advanced photographic practice and thinking; colour processes and printing, including uses of primitive and handmade emulsions, will be used to further explore the documentary and expressive content of still photography. Prerequisite: FAS247H.

FAS348Y

Sculpture

An exploration of contemporary concepts, images and materials in three-dimensional works derived from both natural forms and man's intellectually imposed order on space.

Students will be required to render three-dimensional works in a variety of materials.

Prerequisite: FAS246H, 248H.

FAS434Y Individual Investigations in Printmaking
Students must present both written and oral proposals for their term studies. The final submission and evaluation shall consist of a portfolio and/or exhibition of original prints, test experiments, and evidence of research resulting from the students' investigations.

Prerequisite: FAS334Y, and permission of the Department.

FAS445Y Individual Investigations in Painting
A proposal of the specific area of research, including a list of ongoing professional liaison activities, bibliography, complimentary studies and objectives. *Prerequisite:* FAS345Y, and permission of the Department.

FAS447Y Individual Investigations in Photography
Advanced Photography: Proposals for term work must be presented in both written and oral forms. Emphasis upon student initiative and investigation leading to a final evaluation of the portfolio or original prints, test experiments, and evidence of research. Prerequisite: FAS347Y and permission of the Department.

FAS448Y Individual Investigations in Sculpture
The student explores and executes significantly personalized statements reflecting contemporary and projected directions of three-dimensional works. Students must present both written and oral proposals to establish criteria and parameters within which the work will be evaluated. Prerequisite: FAS348Y(Three-dimensional Studies), and permission of the Department.

## **FRENCH**

Faculty Advisor: Professor N. Swallow

The impact of French culture on the world as we know it has been profound and lasting. Indeed, no understanding of European and North American patterns of thought is complete without a prior understanding of the contributions made to these patterns by Frenchmen on both sides of the Atlantic. The French programme at Erindale College offers students a wide range of courses designed to provide the basis for the study of our French heritage.

For students wishing to pursue a programme leading to a high level of competence in French, we offer two series of language courses (FRE101Y, 121Y, 161Y, 261Y and 361Y, for non-specialists; FRE171Y, 271Y, 371Y, for specialists) using modern methods and maximizing the individual's contact with his instructor. Native speakers of French are not permitted to take for credit FRE161Y, FRE171Y, FRE261Y, nor FRE271Y. Such students, however, will be admitted to any course for which FRE171Y and FRE271Y are prerequisites.

For those wishing a full programme of French Studies, our introductory and upper-year offerings in linguistics and literature completely satisfy the requirements for specialist certification in French Language and Literature. These offerings include the study of French as a language system, the study of various critical approaches to literature, and the study of both French and Québecois literatures.

The series 161Y, 261Y, 361Y, which may constitute a minor programme, is intended to provide instruction for students specializing in other disciplines who wish to develop a practical knowledge of French. The series emphasizes self-help beyond the limits of the individual courses. In exceptional circumstances, a student who has completed FRE161Y may, with the permission of the Department, transfer to a specialist or major programme in French.

In addition to its usefulness as a means of communication, French can also lead to careers in the civil service, international agencies, translation and interpretation, and teaching, as well as to graduate study.

NOTE: Students who began their programme prior to 1981-82 may elect to follow the current specialist, major, minor requirements, or those which were in force when they enrolled, but may not combine the two.

Please see Section 7 for details of Programme Requirement.

NOTE: All courses listed below may be counted toward a Specialist or Major programme in *French Language and Literature*, a Combined Specialist or Combined Major in *Modern Languages and Literatures*, in *Latin and French* or in *Linguistics and French*, with the following exceptions: FRE101Y, 121Y, 161Y, 202Y, 204Y, 261Y, 361Y.

FRE140Y is the normal prerequisite for further literature courses in the Department (except FRE202Y, 204Y); exceptionally, FRE140Y may be taken as a co-requisite along with a higher-level literature course, or, subject to departmental approval, a literature course from another Department may serve as prerequisite.

# FRE101Y Introductory French I

78S, 52P

A basic course for beginners in spoken and written French: comprehension, speaking, reading, and writing. *Exclusion:* Not open to students who have studied French in secondary school; not open to native speakers of French.

## FRE121Y Introductory French II

78S, 52P

Spoken and written French, reinforcing oral/aural competence, reading comprehension, and writing skills. *Exclusion:* Not open to native speakers of French, nor to students with standing in Grade 13 French. *Prerequisite:* FRE101Y, or some background in secondary school French.

## FRE140Y Studies in Modern French and Québec Literature

52L, 26T

Techniques of literary criticism and analysis, based on a detailed study of works selected from the novel, drama and poetry of the nineteenth and twentieth centuries. *Corequisite*: FRE161Y/FRE171Y.

FRE161Y

Practical French - Level I

For students who wish to maintain and improve their general knowledge of French while specializing in other fields of study. Emphasis will be placed on the skills of comprehension, oral and written expression, and self-instruction (newspapers, radio, television, theatre). Exclusion: FRE171Y. Not open to native speakers of French. Prerequisite: FRE121Y/Grade 13 French.

FRE171Y

Language Practice I

A course designed to help students reinforce and develop those language skills (understanding, speaking, reading and writing) necessary for active participation in courses offered by the Department. Exclusion: FRE161Y; not open to native speakers of French.

Prerequisite: FRE121Y/Grade 13 French.

FRE220Y
The Literature of Classicism (Offered in alternate years)
Major writers of the seventeenth century, with emphasis upon the aesthetic and moral characteristics which constitute "classicism". Prerequisite: FRE171Y, 140Y.

FRE224Y
The Literature of Romanticism (Offered in alternate years)
French Romantic poetry, novels and plays of the eighteenth and nineteenth centuries.
Origins of the movement and its later manifestations. Prerequisite: FRE171Y, 140Y.

FRE230Y The Literature of Québec 26L, 26T Selected prose, drama and poetry of the twentieth century, using various critical approaches. Exclusion: FRE204Y. Prerequisites: FRE171Y, 140Y.

FRE261Y Practical French Level II 78S
For students who wish to maintain and improve their general knowledge of French while specializing in other fields of study. Emphasis will be placed on the skills of comprehension, oral and written expression, and self-instruction (newspapers, radio, television, theatre). Prerequisite: FRE161/171Y.

FRE271Y Language Practice II 78S, 26P A course designed further to improve the student's competence in written and oral French. Exclusion: FRE261Y; not open to native speakers of French. Prerequisite: FRE171Y.

FRE272Y

The Structure of Modern French: An Introduction
The phonological, morphological and syntactical systems of modern French. Prerequisite: FRE171Y.

FRE322Y The Literature of the Enlightenment (Offered in alternate years) 26L, 26T The revolution in social, political, religious and intellectual values which characterized the literature of the 18th century. *Prerequisite:* FRE140Y and one 200-series FRE "Specialist" course.

FRE354Y French Theatre 1800 - 1950 (Offered in alternate years)

A critical and theoretical study of representative plays of the nineteenth and twentieth centuries. Prerequisite: FRE140Y and one 200-series FRE "specialist" course.

FRE361Y Practical French - Level III 78S
For students who wish to maintain and improve their general knowledge of French while specializing in other fields of study. Emphasis will be placed on the skills of comprehension, oral and written expression, and self-instruction (newspapers, radio, television, theatre). Prerequisite: FRE261Y/271Y.

FRE364Y Prose Fiction from 1800 to 1900 (Offered in alternate years) 26L, 26T The ways in which such writers as Balzac, Stendhal, Flaubert, Maupassant and Zola developed the techniques of the novel while exploring such themes as ambition, alienation and class struggle. Prerequisite: FRE140Y and one 200-series FRE "Specialist" course.

FRE366Y

Prose Fiction from 1900 to 1950 (Offered in alternate years)

The ways in which twentieth-century writers have refined traditional forms of the novel, experimented and innovated, while exploring the diverse spiritual, intellectual and psychological conflicts of the first half of this century. Prerequisite: FRE140Y and one 200-series FRE "Specialist" course.

FRE371Y Language Practice III 78S, 26P
Further work in written and spoken French, with emphasis on both literary and informal usage. Prerequisite: FRE271Y.

FRE375Y Comparative Stylistics 26P, 26T A comparative study of the characteristics of French and English expression and how they pertain to the problems of translation. *Prerequisite*: FRE271Y and one other 200-series FRE "Specialist" course.

FRE423H Contemporary Theatre (Offered in alternate years) 26L, 26T Drama since 1950 with special reference to the anti-théâtre. Prerequisite: FRE140Y and 3 200/300-series FRE "Specialist" courses.

FRE424H Contemporary Novel (Offered in alternate years)

Prose fiction since 1950 with special reference to the *nouveau roman*. Innovative approaches to the problems of narration and to concepts of time, space and character.

Prerequisite:: FRE140Y and 3 200/300-series FRE "Specialist" courses.

FRE475Y Practical Translation 26L, 26T English to French and French to English. Texts are drawn from literature, business, economics, politics, science, art and advertising. *Prerequisite*: FRE375Y and 3 other 200/300-series FRE "Specialist" courses.

FRE490Y Senior Essay
A senior essay is an independent research project on either a literary or linguistic topic chosen by the student and supervised by an instructor. *Prerequisite*: Permission of the Department.

FRE491H Independent Study
Individual study with a member of staff on a topic of common interest including readings, discussions and papers. *Prerequisite*: Permission of Department.

#### **GERMAN**

Faculty Advisor: Professor C. Saas

For more than the past two hundred years Germany, Austria, and German-speaking Switzerland have played increasingly important roles in European life, both as leaders in commerce and industry and as the homelands of outstanding musicians, philosophers, scientists, psychologists, and religious and political thinkers. Their scholars have excelled in such fields as Religious Studies, Mediaeval Studies, Philosophy, Literary Studies, Classics, Archaeology, History of Art and Music, Physics, Chemistry and Mathematics.

German writers are equally distinguished. Beginning with a vigorous medieval literature and continuing through Lessing, Goethe, and Heine to Kafka, Thomas Mann, and Brecht, German literature has treated the widest possible range of human problems: philosophical and psychological, moral and religious, social and economic. University courses in German offer a thorough study of the more important authors from the Middle Ages to modern times.

The Department also offers a variety of language practice courses on the intermediate and advanced levels, including grammar, translation, conversation, essay-writing, stylistics, and laboratory work. Two courses deal with the history and structure of the language. To consolidate language learning and improve oral fluency the Department co-operates with the German Government whenever possible in sponsoring flights to Germany and summer work for a limited number of undergraduates.

As one of the major languages in a shrinking world, German is valuable in itself as a means of communication. It is particularly useful in careers such as the foreign service, customs and immigration, business and commerce, civil service, interpretation and translation, librarianship, radio and television, music, tourism, and of course teaching. A knowledge of German is a virtual necessity for specialists in certain disciplines, such as Music, Fine Arts, Classics, Theology, and Philosophy. As a literature, German may be studied alone or in combination with other languages and literatures, with Linguistics, Philosophy, or History. The successful completion of a four-year programme, including seven approved courses in German, may entitle a student to do work in the Graduate Division of the Department.

The Department prefers that students come to the university with Grade 13 German: however, since not all high schools offer this programme, an Introductory Course in German is available for students with little or no previous knowledge of the language. Upon completion of this course (GER100Y or 101H) students enter the regular stream of study. In addition, courses are available at the beginning and intermediate level in Reading German (GER105Y or 205Y) for students in the departments or faculties requiring a knowledge of scholarly German. Students who desire information regarding German studies are advised to confer with Professor Saas (828-5289).

It is recommended that students who wish to specialize or co-specialize in German also take GLL190Y in First or Second year.

Please see Section 7 for details of Programme Requirement.

**GER100Y** Introductory German

78L, 52P

An intensive language course for students with no previous knowledge of German. Practice in comprehension, reading, writing and speaking. *Exclusion:* Grade 13 German, GER101H, GER105Y.

**GER101H** Introductory German: Continuation

39L, 26P

An intensive language course for students who have studied some German, but who have not yet attained Grade 13 level. Practice in comprehension, speaking, reading, and writing. This course is the spring term of GER100Y. *Exclusion*: Grade 13 German, GER100Y, GER105Y.

GER202Y Language Practice I (Formerly GER110Y)

104P

Review of basic grammar, expansion of basic vocabulary, practice in comprehension and in the active skills of writing (translations, compositions) and conversation. The Department reserves the right to place students in the appropriate course in the series GER202Y, 210Y, 310Y/311Y, 410Y. Exclusion: GER110Y. Prerequisite: Grade 13 German/GER100Y/101H. Corequisite: Students intending to specialize in German must take a first-year literature course as well.

GER204Y

German Literature of the Late 19th and the 20th Centuries (Formerly GER120Y) 78L An introduction to the study of German literature through works by such writers as Fontane, Hofmannsthal, Mann, Kafka, Rilke, Brecht and Dürrenmatt. Exclusion: GER120Y. Prerequisite: Grade 13 German/GER100Y/101H.

GER206Y Modern German Literature: Language Practice (Formerly GER130Y) 52L, 52P

(Offered in alternate years)

For students who, in addition to an introduction to German literature, want to have further language training. Works by such writers as Kafka, Hesse, Mann and Brecht. A review of basic grammar, expansion of vocabulary, practice in translation and composition. *Exclusion*: GER130Y. *Prerequisite*: Grade 13 German/GER100Y/101H.

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GER210Y	Language Practice II  German at the intermediate level: extension of vocabulary, specific problems of grammar, practice in translation, essay-writing, and conversation. Students taking this course and intending to specialize in German must take a second-year literature course as well. The Department reserves the right to place students in the appropriate course in the series GER202Y, 210Y, 310Y/311Y, 410Y. Exclusion: GER205Y. Prerequisite: GER110Y/200Y/202Y/206Y.
GER220Y	19th-Century Literature from Romanticism to Realism 78L Continues first-year work and prepares for studies in upper-year literature, with emphasis on such authors as Kleist, Grillparzer, Heine, Büchner, Keller and Fontane. <i>Prerequisite</i> : GER120Y/130Y/200Y/204Y/206Y.
GER230Y	19th-Century Literature (Realism and Related Trends): Language Practice (Offered in alternate years) Study of works selected from Biedermeier, Young Germany, and Realism. (Two hours per week). Language work of the First Year is continued (2 hours per week). Prerequisite: GER120Y/130Y/200Y/204Y/206Y.
GER251Y	The Development of German Cinema (Offered in alternate years)  52S, 52P  German cinema from its beginnings as an art form to its current renaissance. Includes films by such directors as Murnau, Herzog, and Fassbinder. Knowledge of German not required; previous film studies experience not required.
GER271Y	German Civilization 78L A comprehensive study of German culture through the ages. Special consideration will be given to art history, music, and philosophy within their historical context. A description and analysis of present-day Germany will be included. No knowledge of German is required. This course does not count toward co-specialization in German. Available to First-Year students by permission of the instructor.
GER310Y	Language Practice III  Study of idioms, translation, essay writing, problems of grammar. The Department

Study of idioms, translation, essay writing, problems of grammar. The Department reserves the right to place students in the appropriate course in the series GER202Y, 210Y, 310Y/311Y, 410Y. Exclusion: GER311Y. Prerequisite: GER210Y/230Y.

GER321H Literature of the Enlightenment (Offered in alternate years) 39L A study of selected works of the Aufklärung with emphasis on Lessing as its foremost representative. Prerequisite: GER220Y/230Y.

GER322H Literature of the Storm and Stress (Offered in alternate years)

A study of some of the early works of Goethe and Schiller and their contemporaries.

Prerequisite: GER220Y/230Y.

GER324Y Prose Fiction from Goethe to Thomas Mann (Offered in alternate years) 78L
The development of the German novel and Novella during their most important phase.
The relation of each work to its social and cultural context; questions of form and technique. Prerequisite: GER220Y/230Y.

GER325Y Romanticism (Offered in alternate years) 78L
A study of German Romantic literature, including works by Novalis, Brentano, Kleist,
Eichendorff, and Hölderlin, as well as basic theoretical texts. *Prerequisite*:
GER220Y/230Y.

GER326H Introduction to Middle High German (Offered in alternate years) 39L
An introduction to the language, literature and civilization of Mediaeval Germany.

Prerequisite: GER220Y/230Y.

GER327H Mediaeval German Literature (Offered in alternate years) 39L Literary analysis of works such as Gottfried's *Tristan*, the *Nibelungenlied*; Middle High German poetry. *Prerequisite*: GER326H.

GER410Y Language Practice IV

78P

Selected problems in grammar, translation, and essay writing at the advanced level. The Department reserves the right to place students in the appropriate course in the series GER202Y, 210Y, 310Y/311Y, 410Y. *Prerequisite*: GER310Y.

GER420Y

Modern German Literature: 1885-1945 (Offered in alternate years)

78L

A study of such authors as Nietzsche, Hauptmann, George, Hofmannsthal, Thomas Mann, Rilke, Hesse, Kafka, Kaiser and Brecht. *Prerequisite*: GER220Y/230Y.

**GER421Y** German Drama from Büchner to the Present: Theory and Practice

78L

(Offered in alternate years)

The development of German drama through the study of such playwrights as Büchner, Hebbel, Hauptmann, Kaiser, Brecht, Dürrenmatt, Handke and Fassbinder.

Exclusion: GER356Y. Prerequisite: GER220Y/230Y.

GER422Y

Contemporary German Literature: 1945 to the Present (Offered in alternate years) 78L A study of major authors since the Second World War, including Böll, Celan, Dürrenmatt, Frisch and Grass. *Prerequisite*: GER220Y/230Y.

GER425Y

Goethe-Schiller-Hölderlin (Offered in alternate years)

78L

Works to be studied include Faust I and II, Schiller's later plays and Hölderlin's poetry. Prerequisite: GER220Y/230Y.

# **GEOGRAPHY**

Faculty Advisors: Professors G.H.K. Gad, T.F. McIlwraith, D.S. Munro

Geography seeks to understand the processes which have brought about current landscapes and current patterns of land-use. Physical geography draws on the earth sciences to understand processes in the biosphere, lithosphere and hydrosphere that lead to distinctive variations or similarities from place to place in the physical environment. Human geography, more concerned with people's use of the earth, draws on the humanities and social sciences in order to understand the creation and organization of distinctive regions, economies and landscapes. A third focus of geography, that of environmental management, seeks to combine the traditions of human and physical geography; the physical basis of environmental deterioration and policy alternatives for contending with such deterioration are of central concern. Together, these three approaches offer a deliberately broad range of topics, and students are encouraged to explore the breadth of geography, as well as develop an emphasis in one of its subfields (e.g. urban geography within human geography).

At Erindale, the geography curriculum places considerable stress on experiential learning. Field studies are an important component of the programmes at all levels and in all areas of the curriculum. They complement lectures, provide material for workshops, develop skills in geographical methods, encourage student involvement in basic enquiry, and build student-staff cooperation. Field work often takes place on the College grounds, in the metropolitian area nearby and further afield in rural Ontario. It has taken students and staff to Vancouver, Montreal, the deserts of Utah and the medieval cities of Europe.

In a world of fluctuating demand for specialists of any kind, the integrative qualities of a geographical education can serve as a useful basis for a wide variety of research, clerical and managerial positions that might be open to candidates with breadth, depth and insight. In the past geography students have found employment in a wide variety of activities, such as planners with municipalities and provincial government departments, environmental analysts with consulting firms, or transportation and location analysts in a wide range of industry and commerce. A significant number of geography students have been successful in gaining admission to master's programmes in such fields as urban and environmental planning, library science, business administration or undergraduate programmes in law and architecture.

Geography offers a three year (15 course) Major and a four year (20 course) Specialist degree (for the detailed regulations see section 7 of this calendar). Within the Major or Specialist programmes students can concentrate in sub-fields of Geography, such as cultural-historical geography, the geography of cities, environmental management or the physical environment. They may also wish to gain breadth by combining study in several sub-fields.

There are close links with other disciplines and interdisciplinary programmes. Geography students often combine their geography courses with work in Approved Areas of Study such as Canadian Studies, Urban Studies, Population and Society, Earth Resources or Material Culture (see Erindale College Calendar for regulations).

Students in other disciplines should find many courses within Geography that complement their interests and expertise. Students with programmes in fields from literature to geology, from chemistry to history, or from fine art to economics may find in geography new ways of combining and developing their knowledge. To allow for this rich opportunity to associate many fields with Geography, courses in the Erindale programme have few prerequisites. A Geography Handbook is available for detailed description of programmes.

In addition to JBG230Y, the following Geography courses are counted as Science courses: GGR100Y, 201H, 202H, 205H, 206H, 207H, 212H, 214H, 276H, 280H, 300H, 301H, 302H, 303H, 304H, 307H, 312H, 374H, 377H, 379H, 381H, 491Y.

Please see Section 7 for details of Programme Requirement.

GGR100Y Introduction to Physical Geography

52L, 26P

World climates, vegetation, hydrology, soils and the physical landscape. Interactions between different sectors of the physical environment are described; the role of man in the physical geographic system is illustrated.

GGR131Y Introduction to Human Geography

52L, 26T

Variations in economic and social organization in pre-industrial and technologically-advanced societies: man's role in landscape change, as expressed through the location of agriculture, industry, and cities.

**GGR201H** Geomorphology: The Science of Landforms

26L, 13P

This course will discuss glacial processes and landforms with special reference to Ontario. Other topics including weathering, slopes, and fluvial geomorphology will also be introduced. Field trips required. *Prerequisite:* GGR100Y/JBG230Y (formerly JBG130Y).

GGR202H Statistics

26L, 13P

(I) Acquaints beginning students with the fundamentals of statistics. The course discusses statistical procedures for describing large quantities of data and for making inferences about populations on the basis of samples. Exclusion: Any concurrent or previous Statistics course.

GGR205H Principles of Soil Geography

26L, 13P

The physical and chemical properties of soils; processes of soil formation; factors of soil formation; systems of soil classification; field and laboratory tests of soil properties. Prerequisite: GGR100Y/JBG230Y (formerly JBG130Y). Recommended preparation: Grade 12 or Grade 13 CHM.

GGR206H Introduction to Hydrology

26L, 13P

Theoretical and practical aspects of surface and groundwater hydrology, together with the consideration of problems in water resource development. Measurement of streamflow, hydrograph analysis, physics of groundwater flow, snowmelt-runoff relationships, and urban hydrology. *Prerequisite:* GGR100Y/JBG230Y (formerly JBG130Y).

GGR207H Aerial Photo Interpretation

26L, 13P

The aim of the course is to teach students to extract, interpret and apply the vast quantities of information present on an air photograph. Considerable attention also is given to presentation of aerial photographic information in mapped form. Students are reminded that GGR202H, GGR212H and GGR207H are a group of related courses and are required for the specialist degree in geography.

GGR212H **Application of Statistics** 

**(I)** 

26L, 13P A continuation of GGR202H including an introduction to non-parametric, analysis of variance and linear regression techniques. Students interested in taking this course should consider carefully the courses listed below as exclusions and choose the appropriate sequence after discussion with faculty members. Exclusion: STA212H, 222Y(G), 242Y, 252Y(G), PSY201H, ECO220Y, BIO361H, SOC201Y. Prerequisite: GGR202H.

GGR214H Climatology Meteorological basis of climate; general circulation of the atmosphere and influence on climatic change; interaction between man and climate. Instruments and measurement techniques are examined in outdoor laboratory sessions. Prerequisite: GGR100Y/JBG230Y (formerly JBG130Y). Recommended preparation: Grade 13 MAT.

GGR220Y Regional Economic Models 52L, 26T An introduction to location, structure and interaction. Use of location theory in explaining industrial and agricultural patterns, transport networks and flow systems, regional economic development.

JBG230Y Man and Environment (Formerly JBG130Y) 52L, 26T Past and present man-environment relationships are examined; principles of ecology, (I) environmental ethics and esthetics are outlined; crucial alternatives for man are discussed. Problems of current environmental concern - land use, material and energy resources, pollution are considered and illustrated by case studies from different parts of the world. Given by the Departments of Biology and Geography. Exclusion: GGR 101Y, BIO130Y, JBG130Y.

GGR233Y Energy, Natural Resource and Environmental Management 52L, 26T Concepts in the management and decision-making process which shape the environment. Environmental quality, impact of technology on society and nature, and evaluation of alternatives. The course is future-oriented, concerned with public policy, and adopts a world-view from a Canadian standpoint. Prerequisite: Any 41/2 or more course credits. Recommended preparation: JBG230Y, (formerly JBG130Y).

GGR245Y **Urban Canada** 52L, 26T An introduction to urban studies through an examination of the development and charac-(I) ter of the urban fabric and urban life in Canada.

GGR253Y **Cultural Geography** 52L, 26T Social change and the resultant imprint on both urban and rural landscapes in preindustrial and modern societies. Special emphasis on the Ontario cultural landscape. Prerequisite: Any five full course credits.

GGR255H **Perspectives On Current Population Issues** 26L, 13P Current discussions on the "population problem" are examined in light of historical writings. Optimum population size and political strength and the tradition of pessimism in population theory. Prerequisite: Any five full course credits.

GGR276H **Introduction to Data Processing in Geography** Practical instruction in the use of computers to solve geographical problems. An introduction to programming in a general purpose language (PL/I) and a special purpose language (SPSS-Statistical Package for the Social Sciences). Exclusion: CSC139H. Prerequisite or Corequisite: GGR202H and 212H, and two other courses in Geography.

GGR280H Cartography 13L, 26P The use of maps and techniques of map making: topics include map interpretation, elements of cartographic design and mapping statistics. The aim of the course is to permit students to develop an areal or spatial perspective which they may bring to their studies in geography.

- GGR300H Field Studies

  Investigation of physical and socio-economic phenomena out-of-doors. Field observations and samples collected during a week-long field camp are analysed and the findings are submitted in a series of reports. Each student must pay the cost of transportation and accommodation. Prerequisite: Any 9 or more course credits.
- GGR301H Environmental Geomorphology (Offered in alternate years)

  Geomorphological aspects of environmental management. Topics will include: erosion and desertification; river channel changes; sedimentation; landsliding; floodplains and flooding; material resources; permafrost; land systems and geomorphological mapping.

  Prerequisite: Any two of GGR201H, 205H, 206H and 214H.
- GGR302H Fluvial Geomorphology (Offered in alternate years) 26L, 13P Concepts of fluvial systems; slope processes; fluvial sediment entrainment and transport; sediment yield; stream morphometry; changes in time. Prerequisite: GGR201H and GGR206H.
- GGR303H Hydroclimatology (Offered in alternate years)

  The water balance is examined from the point of view of the energy exchanges which drive the hydrologic cycle. The ability of drainage basins to act as solar collectors is stressed and the use of such energy for various purposes is described. Applications include the effects upon yield due to snowmelt and evaporation, and the consequences for use by man. Prerequisite; GGR206H/214H.
- GGR304H Bioclimatology (Offered in alternate years)

  Elements of microclimatology as they apply to the environment of plants and animals.

  Energy exchange within bioclimatic systems will be emphasized. Prerequisite:

  GGR206H/214H.
- GGR307H Land Management (Offered in alternate years)

  Application of soil geography to problems of resource use and management. Soil erosion processes and conservation techniques. Soil water management. Drainage and reclamation of wetland soils. Soils pollution issues. Soil capability classification. Selected problems of soils in arid and semi-arid regions, the humid tropics, as well as the Arctic and sub-Arctic. Prerequisite: GGR205H.
- GGR312H Permafrost Environment (Offered in alternate years)
  Study of physical geography in permafrost areas. Topics include: formation and distribution of permafrost; ground ice; geomorphological processes; hydrology; terrain disturbance; problems of construction and resource development. Prerequisite:

  GGR201H/206H. Recommended preparation: Grade 13 MAT.
- GGR324H Geography of Urban and Regional Transporation

  Principles of transport and land use; characteristics of transportation networks and movements; transportation and economic development, past and present: geographical aspects of contemporary transportation problems. Prerequisite: GGR202H.
- GGR325H Spatial and Locational Theory (Offered in alternate years)

  Modern theoretical geography, spatial economics, and regional science. Analysis of spatial form, transport process, land use theory, locational analysis, central place theory, human movement in geographical space. Planning and policy questions. Recommended preparation: GGR220Y.
- GGR330Y Rural Land Use (Offered in alternate years)

  Agricultural origins, agricultural ecology and the economic development of agricultural patterns; the concept of agricultural region and distribution of agricultural types. Prerequisite: One GGR course.
- GGR333H Geography of Energy in Canada (Offered in alternate years) 26L, 13T Regional supply/demand pattern; production and delivery systems; available supplies; end uses and efficiencies; major proposed energy projects. Recommended preparation: GGR220Y/233Y/361Y.

- GGR334H Water Resources Management (Offered in alternate years) 26L, 6T Canadian problems in water resource management; a selection of topics related to policy will be covered, e.g. forecasting the demand for water, inter-basin and inter-national water transfers, industrial and urban water supply and wastewater management, flood/drought as natural hazards, the Great Lakes, water supply in developing countries. Recommended preparation: GGR233Y.
- GGR339H Urban Geography and Political Processes (Offered in alternate years) 26L, 13T The spatial bases of political power and the allocation of benefits from the public purse with a Canadian urban focus. Urban landscape and public policy. The distribution of urban activities in space; public institutions and policies; impact of legislation on the spatial distribution of urban phenomena. Recommended preparation: GGR245Y/220Y.
- JGS340Y

  Concepts, Methods and Values in Urban Studies

  Designed for students concentrating in urban studies irrespective of major disciplinary area. A survey of a variety of types of urban study from the social science perspective. Linkages between the ways in which urban phenomena and processes are conceptualized, the methods employed to study them and the often implicit system of values in which such investigations are framed. Urban researchers, both academic and applied, will be invited to discuss their research in the context of these issues. Given by the Departments of Geography and Sociology. Prerequisite: SOC205Y/GGR245Y and SOC200Y/201Y/(GGR202H, 207H, 280H).
- GGR344Y Geography of the Soviet Union
  A survey of the geography of the Soviet Union, through an examination of topics ranging from the territorial expansion of the Russian state to contemporary issues in planning and development. Comparison of Soviet conditions with more familiar North American situations. *Prerequisite:* Two GGR courses.
- GGR346H The Urban Planning Process in Canada
  Introduction to planning as a conscious collective activity which can or actually does shape the city. Reflection upon the nature of urban planning, rather than discussion of particular urban development issues is emphasized. Major themes: the legal framework of planning in Ontario, outline of planning history, current issues in planning theory. The course may include a one week-long internship in a planning office. Prerequisite: GGR245Y/SOC205Y.
- GGR349H Workshop in Advanced Urban Geography (Formerly GGR349Y) 52P
  The emphasis in this course is on data collection by course participants, and analysis and presentation in a workshop/seminar setting. Part of the data collection will involve field work. Research topics will be selected according to current interests of students and staff.

  Apart from lectures and research workshops, the course may involve a field trip to another large city. Exclusion: GGR349Y. Prerequisite: GGR245Y.
- GGR351Y Landscape, Economy and Society in the New World 1500-1900 52L, 26T The historical geography of northeastern North America, west to the Great Lakes and Mississippi Valley, south to the Chesapeake region. Evaluation and utilization of the land by successive generations of observers and users is of central interest in this course. Prerequisite: Any eight full course equivalents.
- GGR352H Resources and Economic Development

  An introduction to methods of resource appraisal as an input to economic development.

  Use will be made of an interactive simulation model for project appraisal and budget formulation. A background in locational analysis, environmental problems and data processing is recommended. Prerequisite: Any eight full course equivalents.
- GGR353H History of the Canadian Environment (Offered in alternate years)

  For more than four centuries Canadian territory has been the subject of use and abuse by mankind. This course deals with the exploitation of natural and cultural resources from prehistoric times, with major emphasis on the consequences of technological innovation after 1800 and the growth of the conservation movement. *Prerequisite:* Any nine full course equivalents.

GGR354H Applied Problems in Resource Development 26L, 13T The analysis of specific problems in the development of resources to meet basic human needs especially the production and distribution of food and water. Impacts will include

regional disparities, income redistribution and environmental change. Prerequisite: Any

eight full course equivalents including GGR352H.

26L, 13T

GGR357H Geography of Housing and Housing Policy An introduction to housing as both product and process. The analysis of housing markets in a spatial context, emphasing the transaction mechanism, residential location and housing choice, the role of the state, public housing and the relationships of housing changes to patterns of mobility and neighbourhood change. Case studies of specific policy issues and alternative housing strategies. Prerequisite: GGR245Y.

Canadian Contemporary Regional Studies (Offered in alternate years) GGR361Y 52L, 26T A study of the spatial relations and distribution patterns of the physical phenomena. present and potential resources, population, and regional economic development. Prerequisite: Any two GGR courses.

GGR364H Historical Geography of Ethnic Groups in Canada 26L, 13T The creation and survival of ethnic communities in Canada with particular emphasis on rural settlements. Aspects of ethnic terrioriality, the stability of ethnic communities, and the adaptation of immigrants to the Canadian environment.

GGR374H Water Quality (Offered in alternate years) 26L, 13P An introduction to the physical and chemical characteristics of natural water with emphasis on their importance to industrial and domestic supplies. Topics included are: measurement and analysis of dissolved and suspended constituents, chemical equilibrium in dilute aqueous solutions, and spatial variability of water quality with emphasis on Southern Ontario, Prerequisite: Grade 13 Chemistry or CHM118Y/150Y, GGR206H.

GGR377H **Environmental Monitoring (Offered in alternate years)** 26L, 13P Techniques of point measurement of environmental parameters are examined with particular emphasis on air and water pollution. Problems of sampling in time and space are subsequently treated with a view to designing pollution indices. Applications to human health, government policy and industrial activity are noted. Prerequisite: JBG230Y/one 200 level full course equivalent from GGR.

GGR379H Advanced Field Methods in Physical Geography (Offered in alternate years) Structured around field work, the course will include at least one major field trip. Students will be responsible for reading selected articles relating to the study areas prior to visiting the field. Projects will involve mapping of physical features (i.e., geologic structures, vegetation, soil water) on a preliminary basis from aerial photographs in the laboratory and subsequently in the field. The intention is to conduct the major field trip outside Southern Ontario to provide a contrasting environment for the students (who, it is assumed already have some familiarity with the local area). Prerequsite: Any three courses drawn from one or more of the following: Physical Geography, Geology and Biology.

GGR381H Research Design Designed to give students experience in the definition of and proper approach to a research study. Sampling schemes, analytical procedures, and thesis or report formats are also covered. Students prepare a paper on the research problem which they would intend to pursue in fourth year. In addition to the statement of purpose, the paper embodies a thorough review of pertinent literature and where appropriate, date from interviews with experts in the field, personal observations and/or preliminary sample analyses. Prerequisite: Any 10 or more course credits.

GGR441H **Advanced Topics in Urban Studies** An advanced seminar dealing with topics in urban studies, to be selected according to staff and student interests. Topics include images of cities and the spirit of place, the city in history, social theory and the city. Prerequisite: Fifteen or more full course credits.

GGR491Y B.A./B.Sc. Thesis

A research project, each student working on a topic of his choice under the individual guidance of a member of the staff. Copies of the thesis are to be submitted by March 1, and the student will present it before an examining committee. *Prerequisite*: GGR381H; six GGR courses: fifteen or more full course credits.

## **GREEK AND LATIN LITERATURE IN TRANSLATION**

(See Classics)

GLL190Y Greek and Roman Religion and Mythology

52L, 26T

The Myths of Greece and Rome will be studied in connection with the religion of the ancient world. Attention will be focussed on the origin and development of the most important myths and their significance as inspiration for art and literature. In addition, the course will include discussion of different schools of interpretation of myth, and comparison of Greek and Roman myths to those of other cultures, particularly of the Near East and Northern Europe. *Exclusion*: GLL191H(G), 205(G).

GLL202H The Ancient Novel (Offered in alternate years)

26S

(I) The human and social climate in which prose fiction arose; the Greek romances of love and adventure (Heliodorus, Longus, Xenophon), and the more ironical and socially conscious works of the Roman writers, Petronius, *The Satyricon* and Apuleius, *The Golden Ass*; parallels with modern literature.

GLL204H Roman Satire (Offered in alternate years)

26S

A reading of selected Roman satires, with emphasis on Horace and Juvenal. Verse satire is the most personal form of Roman Literature and offers the modern reader a vivid and witty picture of the people and society of the times. Of further interest is the influence of Horace and Juvenal on the formation of modern English and European satire.

GLL300Y

(I)

Greek Tragedy and Comedy (Formerly GLL200Y)

528

(I) Greek drama from the origins of tragedy in the sixth century to New Comedy, with close study of selected plays of Aeschylus, Sophocles, Euripides, Aristophanes, and Menander, and attention to Aristole's *Poetics*.

#### **GREEK**

(See Classics)

GRK100Y Introductory Greek with Selected Readings (Offered in alternate years) 104S Introduces beginners to the ancient Greek language and prepares them for the reading of Greek literature.

GRK210H Socrates On Trial (Offered in alternate years)
Plato, Apology of Socrates. Further study of the language. Prerequisite: Grade 13
Greek/GRK100Y.

GRK213H The Wanderings of Odysseus (Offered in alternate years) 39S Homer, Odyssey, 6, 9, 11. Further study of the language. Prerequisite: Grade 13 Greek/GRK100Y.

## **GREEK AND ROMAN HISTORY**

(See Classics)

GRH100Y Greek and Roman Civilization 52L, 26T
Its political, economic and cultural evolution, beginning in an age of independent citystates, reaching rich maturity in the Hellenistic age of Great Powers, and culminating in the
multiracial and multicultural Roman Empire. Its place in world history. Exclusion:

GRH200Y/202Y if taken in the same year of study.

GRH200Y
(I)
Greek History to the Death of Alexander (Offered in alternate years)
Political, economic and intellectual progress and achievement in the Greek classical age.
Exclusion: GRH100Y if taken in the same year of study.

GRH202Y
(I)
The Roman Empire (Formerly GRH300Y)(Offered in alternate years)
52L, 26T
Constitutional, economic, social, military and religious developments in the empire, from Augustus to St. Augustine. Exclusion: GRH100Y if taken in the same year.

GRH216Y
(I)
Alexander the Great and the Hellenistic Age (Offered in alternate years)
The achievement of Alexander and its importance for subsequent Mediterranean history.
The creation of Hellenistic states and their historical significance.

GRH218Y
(I)
Religion in the Roman Empire (Offered in alternate years)
A study of the different religious systems and beliefs competing for men's allegiance in the Roman world of the first four centuries A.D. Classical paganism and its cults; emperor worship; the philosophical alternatives to religion; astrology; the mystery religions and Mithraism; the rise of Christianity and the development of its teachings and institutions within the social context of their times; official and popular reactions to Christianity conversion, opposition, persecution, and the eventual establishment of Christianity as the Empire's sole religion.

GRH232H

(I)

Ancient Astrology and Astronomy (Offered in alternate years)

Greek and Roman views of the universe; the origin and development of scientific astronomy, astrology, and star worship.

GRH234H

(I)

Ancient Science and Technology

Greek and Roman technology and science, and their relationship to each other; comparisons with developments in other ancient cultures; explanations for the limitations of ancient technology.

GRH311Y Caesar and Augustus (Offered in alternate years)

Their work and their contribution, as well as the role of their contemporaries, Pompey,
Crassus, Cicero, Antony, and Brutus. Based primarily on original sources (in translation),
such as the writings of Caesar, the correspondence of Cicero, and the political testament of
Augustus. Exclusion: HIS486Y.

# HISTORY

Faculty Advisor: Professor R.E. Johnson

History is exclusively neither an art nor a science, but a subtle blend of the two. The historical imagination reaches beyond the limits imposed by scientific method, but it does not enjoy unfettered poetic license. What is not required of art is required of history - to discover what the old universe was like rather than to invent a new one.

We study the past in order to influence, no matter how modestly, the world around us and the world within us. Historical inquiry is always a response to the human need for information, an understanding of the broad patterns of social development. Concentration in history can provide students with the analytical skills and intellectual judgement required in a number of fields. From academic research and teaching to a career in publishing, journalism or the media, the historian's contribution is substantial. Training in history is appropriate preparation for a career in law or in government service as a researcher, archivist or policy analyst.

The history programme at Erindale is designed to give students a comprehensive view of the modern world. Strong core areas in European, Canadian and American History are supplemented by courses in British, Russian, Latin American and Third World History. Introductory 100 and 200 level courses are normally conducted as a combination of lecture and tutorial; more advanced courses are often offered as seminars, allowing students experience in independent research and in presenting their findings.

Students wishing to receive certification in History should register annually, beginning in their second year, with the History Secretary, (Room 236, North Building), to ensure their progress through the programme.

Please see Section 7 for details of Programme Requirement.

HIS100Y Modern Europe, 1789-1970

52L, 26T

Europe from the French Revolution to the 1960's. Political, economic, social and cultural aspects will be covered.

HIS107Y The Emergence of the Modern World

52L, 26T

An introduction to the problems and methods of social and political history through comparative study of modern Western and "Third World" societies. Major themes will include the commercial and industrial revolutions, peasant societies and agrarian change, the rise of the nation-state, popular and revolutionary movements, and colonialism and resistance to it. *Exclusion*: HIS101Y.

HIS204Y (I) History of Italy (Offered in alternate years)

52L, 26T

A general survey of the history of Italy: political, social, economic and cultural.

HIS210H

Sexual Revolution in the Modern World (Offered in alternate years)

26L, 13T

An examination of changing trends in marriage, family composition, and sexual expression from the 18th century to the present. These will be studied in relation to industrialization, the emergence of centralized nation-states, and other principal economic, political, and cultural developments of the modern era, focusing mainly on Europe.

HIS220Y (I) The Shape of Medieval Society

52L, 26T

Europe from the late Roman period to the fifteenth century. A chronological survey of the various cultures that constituted medieval society and the actions and institutions that determined its particular shape.

HIS231Y

(I)

History of Great Britain, 1800-Present (Offered in alternate years)

52L, 26T

The major themes of British history from the early 19th century--the effects of industrial society, the development of parliamentary democracy, the emergence of the welfare state, foreign and Empire relations, and religious, cultural and intellectual change. *Exclusion*: HIS234Y.

HIS233Y

Politics and Social Change in England, 1530-1800(Formerly HIS230Y)

52L, 26T

(Offered in alternate years)

An introduction to the development of government and society in England from the sixteenth to the eighteenth century. Attention will be given to such events as the English reformation, the Civil War, the Glorious Revolution, the beginnings of industrialization, and the challenge of the American and French Revolutions. *Exclusion*: HIS230Y, 234Y.

(I)

HIS243H Early Modern Europe, 1450-1648

26L, 13T

The political, social, economic, and intellectual history of continental Europe. The Renaissance, the Reformation, Counter-reformation, growth of the territorial monarchies, and the religious wars. *Exclusion:* HIS240Y.

HIS244H Early Modern Europe, 1648-1815

26L, 13T

(I) The political, social, economic, and intellectual history of continental Europe. Development of royal absolutism, social change and the crisis of the *Ancien Regime*, the Enlightenment, the French Revolution, and the Napoleonic era. *Exclusion*: HIS240Y.

HIS248Y The Industrial Revolution

52L, 26T

(I) The economic, technological and social transformation of European society in the eighteenth and nineteenth centuries. Why did these transformations occur when they did, and why did certain nations become industrial more rapidly and completely than others? The effects of industrial change on social structures and political organization, as well as the rise of new social classes and the interaction among them.

HIS250Y

(I)

(I)

Russia Since the 9th Century (Offered in alternate years)

52L, 26T

A thematic approach concentrating on the modern period (post-1700). Students are encouraged to follow their own interests through independent reading and special projects.

HIS262Y

**History of Canada** 

52L, 26T

An introduction to the social, political and economic history of Canada. Particular attention to regional diversity, the development of political movements, and the implications of economic development based on staples.

HIS271Y

**American History Since 1607** 

52L, 26T

(I) A survey of significant developments in American history (e.g. the American colonies, the Revolution, the Civil War, industrialization, the effects of the Cold War) and important characteristics of American society (e.g., social mobility, racism, imperialism). Lectures and readings will combine the perspectives of political, social, economic and diplomatic history.

HIS290Y

(I)

Introduction to Latin American History (Offered in alternate years)

52L, 26T

Presentation of the past of Latin America in relation to its present, through investigation of selected themes: colonialism, imperialism and dependence; the succession and interaction of tribal, feudal and capitalist forms of society; racial and cultural mixture; democracy and dictatorship; nationalism, etc.

HIS300Y

War and the Military in American Life

26L, 26T

How Americans have approached, experienced and been affected by war, and the development and sociology of the military establishment, beginning with the nature of early modern warfare and its application in Anglo-America through United States involvement in Vietnam and the experiment with a volunteer army.

HIS307H

The Russian Revolution of 1917

261

The fall of the Romanovs and the coming to power of the Bolsheviks have been subjects of intense controversy for more than 60 years. This course will examine the principal interpretations of these events by focusing on original sources from 1917, e.g., memoirs, resolutions, diplomatic and journalistic reports, all of which are abundantly available in English. Each student will focus on a single party or personality, whose actions and ideas will be followed through the tumultuous days of 1917. *Prerequisite*: One course in Modern European History.

HIS308Y

The History of Women since 1500

52L, 26T

This course will look at some important aspects of women's lives that have changed in the past four hundred years -- the value and nature of women's work; the relationship between work and personal relationships; the role of women in the family and the involvement of women in public and political life. Although the course will mainly look at European sources, and the experiences of European women, it will consider American material insofar as it is supplementary or illustrative. *Recommended preparation*: A course in European history.

HIS309H The Atlantic Provinces, 1500-Present (Offered in alternate years)

An historical introduction to an often neglected region of Canada. Emphasis on the chronic economic underdevelopment of this region, the causes of dissatisfaction in the hinterland, and the development of a regional identity. Prerequisite: HIS262Y.

HIS313Y Canadian Labour and the Left (Offered in alternate years) 52S
A study of the growth of the Canadian labour movement since Confederation and of the related development of Canadian radicalism. Social, economic and regional themes will be incorporated. Prerequisite: HIS262Y/POL100Y.

HIS314Y French Canada Since the Conquest (Offered in alternate years)

The development of the French-Canadian community in Canada, French-Canadian nationalism, the political and economic development of Quebec, and the cultural evolution of French-Canadian society both within and outside of Quebec. Prerequisite: HIS262Y.

HIS319Y

Social Movements in 20th Century Canada (Offered in alternate years)

An examination of social movements and political protest in Canada from the 1890's to the 1970's. Particular attention will be given to the growth and impact of the social gospel, temperance and prohibition, trade unions, socialist parties, women's movements, regional protest and French Canadian nationalism.

HIS321Y Canadian Business History 52S
A study of major developments in the history of business in Canada and of relationships between business and economic development, government policy and social change since Confederation.

HIS323H Canadian Political Parties 26S
A study of the Canadian national and provincial party systems with an emphasis on techniques of political management in a federal system.

HIS327Y War and Revolution in 19th Century Europe (Offered in alternate years)

The impact of war and revolution on European history from Napoleon to the First World War. Major topics will include the Napoleonic Empire and the Vienna Settlement, the French Revolution of 1830, the European Revolutions of 1848, the Crimean War, the wars of Italian and German unification, the Russo-Turkish War, war and colonial expansion, the Russo-Japanese War and the Russian Revolution of 1905, the Balkan Wars, and the outbreak of war in 1914. Prerequisite: P.I.

HIS329Y
The Russian Revolutionary Movement (Offered in alternate years)
The development of revolutionary ideologies, tactics, and organizations from the Decembrist movement (1825) to the consolidation of the Bolshevik Revolution. Concentrates on the writings of individual leaders (Herzen, Bakunin, Lenin) and their different strategies and goals in the struggle against tsarism. *Prerequisite*: P.I.

HIS330Y Indians and Indian Policies in American History
A study of the relationships between Indian tribes and the government and society of the
United States. Major themes will include pre-contact society and culture; the colonization
of America and the origins of race consciousness; Indian removal; movements for cultural
renewal; the frontier wars and Indian participation in America's major wars; the concentration, reservation and allotment policies; the Indian New Deal; and the Red Power
movement.

HIS334H Multinational Corporations and International Relations
A study of the emergence of multinational corporations and their impact on international relations since the late 19th century. Major topics will include: the methods and pace of expansion of multinational enterprise; the relationships of multinationals with their parent governments, with other developed countries and with under-developed societies; multinational corporations and war.

HIS337Y	British History, 1815-1914 (Offered in alternate years)	52S
	The major themes of British history from the late 18th Century: the emergence of indus	trial
	society, the fate of aristocracy and religion, cultural and intellectual change, for	eign
	relations, constitutional development and political history. Prerequisite: P.I.	

- HIS338Y

  From Empire to Welfare State, 1906-Present
  A topical analysis of political, economic and social issues in Modern British History.
  Themes include the decline of the Liberal Party, the impact of two world wars, the making of the welfare state, Empire developments, post-war Conservative and Labour Britain.
- HIS343Y France and Germany 1848-1945

  A comparative study of the development of France and Germany from the revolutions of 1848 to the end of the Second World War. Emphasis will be on the interaction of economic, social and political developments including the diplomatic relations between them but students will be free to pursue topics in intellectual and ideological history. *Prerequisite*: P.I.
- HIS346Y French Society and Culture in the Eighteenth Century

  The purpose of this course is to provide students with a better understanding of the Old Regime from the death of Louis XIV to the Revolution. Among themes to be considered are the Enlightenment and its non-elite impact, eighteenth century utopias, urban growth, manufacturing, forms of political opposition to the absolute monarchy, applied arts, popular culture, the nobility, dechristianization, the demographic surge and its consequences. Recommended preparation: HIS240Y or HIS244H.
- HIS349Y Renaissance and Baroque France, 1500-1715 (Offered in alternate years) 52S
  Political, social, economic, and cultural history of France. Stress will be placed on modern historiographical trends. Recommended preparation: HIS240Y.
- HIS352Y History of War to 1815
  A survey of war as understood and practiced by ancient, medieval and early modern societies.
- HIS353Y International Relations, 1870-1945

  The international relations of the European powers at their zenith and in decline. The interaction of the European powers is studied from the creation of the Second Reich to the origins of the First World War, the Versailles settlement, the inter-war "twenty year crisis" through the Second World War. The economic and social framework will be examined as well as political conflicts. *Prerequisite*: P.I.
- HIS355Y Totalitarianism (Offered in alternate years)

  An examination of controversial interpretations of this period by some of Europe's leading authors with a view to understanding better what underlies the triumph of the 20th century totalitarian movements Fascism, Nazism, and Stalinist Communism. Prerequisite: P.I.
- HIS356Y

  Social History of Russia from the Rise of Serfdom to the Present

  Emphasizes the condition of the common man as affected by changing political and economic circumstances. Among the topics included are: the serf economy, the state as agent of social change, the causes and consequences of emancipation, industrial growth and modernization (before and after 1917), and the achievement and prospects of Soviet society. Prerequisite: P.I.
- H1S357Y

  The Renaissance
  A cultural history of the 15th and 16th centuries set against the socio-economic background. The course will concentrate upon the development of the Renaissance in Italy and will deal with its manifestations in Northern Europe.
- HIS365H Ontario 26S
  The study of the political, social and economic development of Ontario with special emphasis on the period from Confederation to the present. *Recommended preparation*: HIS262Y.

Canadian-American Relations HIS367H

26S This course will deal with political, economic and cultural relations between Canada and the United States since the American Revolution. Particular emphasis will be given to American economic and cultural influences upon Canada. Exclusion: HIS367Y Canadian-American Relations.

HIS368H Western Canada 268

A political and social history of Canada's four western provinces. Recommended preparation: HIS262Y. Exclusion: HIS368Y.

The United States in the Twentieth Century HIS372Y

26L, 26T

A topical approach to the twentieth century designed to familiarize the student with important political, social and economic developments; for example, some topics considered will include the behaviour of the United States in the international arena, changing sexual roles and the dynamics of the family, the growth of economic and political corporatism, the ideology of American individualism, and militarism in postwar society.

HIS374Y The Medieval Tradition (Offered in alternate years) 26L, 26T

A cultural and intellectual history of the high Middle Ages. This course examines the classic expression of medieval culture from the literature of Dante and Chaucer to the theology of Abelard and Aquinas and the art of Giotto and the gothic cathedral. The purpose is to acquaint students with the modes of thought and feeling that characterized the medieval synthesis.

HIS376Y

The United States Between the Wars, 1918-1941 (Offered in alternate years) 26L, 26T The study of economic, political, cultural and diplomatic developments associated with the emergence of "modern America." Major topics will include: the strengths and weaknesses of a consumer and corporate society; the transition from Republican to Democratic Party dominance; youth culture and protest culture; and the expansion of economic and political activity in the international arena. Recommended preparation: HIS271Y or 372Y.

HIS377Y

Topics in Twentieth Century American Diplomacy (Offered in alternate years) 26L, 26T An examination of United States behaviour on the international scene since the 1890s. Economic, political and ideological factors involved in the growth of the American empire, World War I, World War II and the Cold War will be studied.

HIS378Y

Immigration and Ethnicity in American History (Offered in alternate years) 52S The seminar will consider the extent to which the United States has been a "melting pot". including migrations to and settlement patterns in America, concepts of nationality and race, and the processes of assimilation and acculturation. The focus will be on immigration history, although group consciousness among blacks and American Indians will also be discussed.

HIS379H

The Iberian powers, pioneers in European expansion, had by 1800 been reduced to a marginal position in European politics. This course will examine the tremendous crisis provoked by the Napoleonic invasion and the independence of Latin America, the prolonged liberal/conservative struggles of the 19th century, the slow beginnings of industrialization, and the emergence of combative anarchist and socialist movements leading up to the pro-fascist coup of 1926 in Portugal and the Spanish Civil War (1936-39).

Recommended preparation: Gerald Brenan, The Spanish Labyrinth; A.H. de Oliveira

Marques, A History of Portugal (2 vols.).

HIS389Y

Social Revolutions in Latin America (Offered in alternate years)

Spain and Portugal from Napolean to Franco, 1808-1936

13L, 13T

A course focusing on politics and revolutionary movements in modern Latin America and related areas (e.g., southern Europe); emphasis will be placed on three or four particular countries, to be studied on a comparative basis. The course will also attempt to introduce possible approaches to history as a social science. Prerequisite: P.I.

- HIS391H Mexico: Independence to Revolution, 1810-1960 (Offered in alternate years) 26S
  A seminar considering the growth of the Mexican nation from the struggle for independence to the "institutional revolution" of today. Prerequisite: P.I.
- HIS392Y Canada and War (Offered in alternate years) 52L
  A topical examination of the Canadian experience of war and military preparedness including problems of political-military relations, conscription, aid to the civil power and militarism. Recommended preparation: HIS262Y.
- HIS397H From Fascism to Democracy: Spain and Portugal, 1936-1982

  13L, 13T With the outbreak of the Spanish Civil War in 1936, the deep-rooted social conflicts of the Iberian peninsula merged with the general European struggle between fascism and democracy. The course will examine both political and military aspects of the civil war, the Franco and Salazar dictatorships, the role of the Church, the Communist Party and the liberal opposition in both countries, leading up to the Portuguese Revolution of 1974-75 and the liberalization of Spain following Franco' death in 1976. Prerequisite: P.I. Recommended preparation: Gerald Brenan, The Spanish Labyrinth; A.H. de Oliveira Marques. A History of Portugal (2 vols.).
- HIS399Y The Era of the French Revolution and Napoleon, 1789-1815 (Offered in alternate years) 52S
  The origins, course and effects of the French Revolution and the impact of Napoleon on
  France and Europe. The perspective will be continental, including the histories of the
  major European powers. Recommended preparation: HIS244H.
- HIS401Y Independent Reading
  An independent study of an area of particular interest to a student or group of students carried out under the supervision of a staff member. No student may take more than one Independent Reading course in a single year. Prerequisite: P.I.
- HIS403Y

  Independent Reading

  An independent study of an area of particular interest to a student or group of students, carried out under the supervision of a staff member. No student may take more than one Independent Reading course in a single year. Prerequisite: P.I.
- HIS404H Explorations in Oral History (Offered in alternate years)

  A seminar on the collection and analysis of historical evidence. Oral history uses first-hand interviews to obtain information about historic events from eyewitnesses. With the aid of faculty members from several fields of history, students will define individual research projects, carry out interviews, and produce an essay and seminar report interpreting the results. Prerequisite: one second- or third-year course in modern history.
- HIS422Y The Crusades

  A study of the military expeditions undertaken by European Christians in the 11th, 12th and 13th Centuries to recover the Holy Land from the Moslems. The crusades will be examined from the standpoint of the European, East Roman (Byzantine) and Moslem participants. *Prerequisite*: HIS220Y or HIS352Y.
- HIS431Y Topics in Twentieth Century British Diplomacy
  The exercise and decline of British power in foreign affairs, including war aims and the peace settlements of World War One, appeasement between the wars, World War Two, socialist alternatives in foreign affairs, the Suez crisis, Rhodesia, and entry into the European Common Market. Prerequisite: P.I.
- The Making of the Modern Welfare State

  The seminar will examine in a topical form the emergence of the modern welfare state. The Elizabethan Poor Laws, succeeding forms of social assistance, insurance and security, the post-war welfare state and its contemporary critics will be analyzed. Recommended preparation: A previous course in British history.

HIS479Y Cold War America

52S

An examination of significant political, economic, social and intellectual developments, including Cold War foreign policies, economic and social reforms, McCarthyism, the Civil Rights movement, women's liberation, the "counter-culture," and the Indochina Wars. *Prerequisite*: P.I.

HIS485Y

The Problem of Government in Classical Greece (Offered in alternate years)

52S

A study of forms and ideas of socio-political organization in ancient Greece, concentrating on Athens, from Solon, the founder of her democracy, to Pericles, its greatest exponent.

HIS486Y

From Republic to Principate (Offered in alternate years)

52S

The breakdown of republican institutions and the evolution of the autocratic system of the Principate, traced from 133 B.C. to 14 A.D., focusing particularly on the life and work of Julius Caesar and Caesar Augustus. *Exclusion*: GRH311Y.

# **INTERDISCIPLINARY STUDIES**

Faculty Advisor: Professor R.W. Van Fossen

"Interdisciplinary Studies" is the name given to a special programme of courses which, because of their innovative character, might not readily be accommodated within the programmes of the regular academic departments of the College. Subject areas are changeable from year to year and students are advised to consult the Associate Dean of Humanities for current details.

INE203H

**Effective Writing** 

26L, 13P

This half-credit course is for students who already write passable prose but who want to write better. The class will analyse the principles and practice of effective writing and explore various kinds of non-fictional prose, with special emphasis on the expository essay. There will be frequent writing exercises. A screening test will be given at the beginning of the course. *Exclusion*: INE205H, ENG100Y.

INE205H

Writing for Business

26I 13P

Aimed at students who will be entering the business world, and who already write passably, this half-course will explore the principles and practice of effective writing, with special emphasis on business correspondence and reports. There will be frequent writing exercises. A screening test will be given at the beginning of the course. *Exclusion*: INE203H, ENG100Y.

INE303Y

Writing and Teaching

26L, 26P

Designed in cooperation with the Faculty of Education and local boards of education, this course is for teachers and prospective teachers who want to know more about the principles of effective writing and how to teach students to write better. The course will examine theories of rhetoric and composition, the history and characteristics of the English language, and the stages of writing development from childish syntax to sophisticated prose. It will also provide a range of practical approaches to teaching writing, including teaching strategies, and methods of evaluation.

INE350H

Seminar in Material Culture

26S

This is a research seminar open to students with 9 or more full course equivalents completed, 3 or more in Material Culture. Students will prepare a substantial research paper for presentation in both oral and written form. Cooperating faculty members will be invited to lead seminar discussions, with special attention given to research techniques.

INE390Y

**Independent Studies** 

TBA

A reading and research project, chosen by the student and supervised by a faculty member, designed to integrate work in an Approved Area of Study. The project will culminate in the writing of a substantial essay. The supervisor will be chosen in consultation with the Programme Co-ordinator. Open only to students enrolled in an Approved Area of Study. *Prerequisite*: Ten or more full-course equivalents and permission of the Programme Co-ordinator.

INE401Y Senior Essay

TBA

A major independent research project chosen by the student and supervised by a faculty member. All projects must be approved by the Committee on Canadian Studies by the end of classes in the previous year. Application forms are available from the Programme Coordinator. *Prerequisite*: Open only to students with at least fifteen full-course equivalents and the permission of the Programme Co-ordinator.

INE402Y Selected Topics in Canadian Studies

TBA

A seminar course considering varied perspectives on Canadian themes or periods as presented by several disciplines. The topics to be studied will be decided in accordance with the special interests of the students involved. *Prerequisite*: Permission of the Programme Co-ordinator.

### ITALIAN

Faculty Advisor: G. Pugliese

The Italian programme at Erindale is designed to provide a comprehensive study of the diversity which is Italy, a country whose culture continues to be a significant force in the shaping of Western civilization. The greatest attention is devoted to literature, as a principal manifestation of the national spirit, with courses organized around major figures, movements or genres, but other facets of Italian life and civilization are also examined. Language is studied scientifically from all points of view - practical, stylistic, philological and historical - at all levels of instruction.

Knowledge of another language and culture is regarded favourably by other disciplines and is frequently required for graduate-level studies. Graduates in Italian are in demand and will continue to be. There are career opportunities in teaching, foreign affairs, government, social services, trade and law. Furthermore, the presence of large Italian communities throughout Canada, provides a social, intellectual and practical incentive for the study of Italian.

Students are free to design for themselves the programme of study best suited to their interests and needs, and they can choose from available courses at Erindale and at St. George. There are conditions, however, which must be satisfied (a) for specialization (in Italian alone) (b) for a major (in Italian and another discipline) and (c) for a minor.

In case of uncertainty with regard to the programme of study, course content, graduate studies requirements, or any related matter, students are strongly advised to consult the discipline representative for Italian at Erindale.

Please see Section 7 for details of Programme Requirement.

ITA100Y Italian For Beginners

104L, 26P

An introduction to the Italian language for students of non-Italian linguistic background. Essentials of grammar, oral practice, language laboratory, translation. *Exclusion*: Previous schooling in Italian.

ITA115Y Beginning Italian For Dialect Speakers

104L, 26P

An introduction to the main elements of Italian grammar for students who speak, understand or have studied some Italian but do not have Grade 12 or 13. Language laboratory, linguistic study of modern Italian prose, composition, conversation. *Exclusion*: Grade 12/13 ITA.

ITA200Y Continuing Italian

78L, 26P

This course consists of a thorough review of grammatical structures and is designed to improve the students' self-expressiveness in Italian. Selections from contemporary authors and passages dealing with present-day issues are used as a basis for discussion in Italian. For students whose background in Italian is solely academic. *Prerequisite*: ITA100Y/Grade 13 ITA.

ITA210Y Continuing Italian For Dialect Or Native Speakers

78L, 26P

A comprehensive review of Italian grammar with readings from a variety of texts. Composition and conversation are integral parts of this course. *Prerequisite*: ITA115Y/Grade 13 ITA.

ITA221Y Forms of Modern Italian Literature

52L, 26T

An introduction to twentieth century Italian literature through a study of representative "novelle", shorter works of fiction, plays and poetry. Selections will include writings by Moravia, Calvino and Pandolfi and the major poems of Saba, Ungaretti Montale, Quasimodo and others. *Prerequisite*: ITA100Y/115Y/Grade XIII Italian. *Recommended preparation*: Good knowledge of Italian.

ITA230Y Italian Literature Through the Ages

52L, 26T

A survey of the shorter forms of Italian literature from the Middle Ages to the beginning of the twentieth century. Emphasis will be given to poems and "novelle" but theoretical pieces and short plays of recognized literary significance will also be examined. *Prerequisite*: ITA100Y/115Y/Grade 13 ITA.

ITA235Y Topics in Italian Civilization

52L, 26S

Various aspects of modern Italian civilization such as fascism, the Resistance, mafia, industrialization, language and mass-media, immigration, the generation of '68, terrorism, women's liberation, religion and political ideologies will be discussed through a selection of short stories, novels, sociological and historical documents, articles from newspapers and magazines. *Prerequisite*: ITA100Y/115Y/Grade 13 ITA.

ITA240Y Italian Cinema (In English)(Offered in alternate years)

52L

A course designed to explore the characteristics of the modern Italian film. The stress will be on works by such established masters as Rossellini, Visconti, Fellini and Antonioni, but films by younger directors (e.g. Wertmuller, Bertolucci) will also be examined. Analysis and discussion to be entirely in English.

ITA270H

Reality, Myth, Death: The Modern Italian Novel (In English)

26L

(Offered in alternate years)

All classes will be conducted in English and all novels will be in English translation. Works to be read include: Moravia's *The Conformist*, Bassani's *Garden of the Finzi-Contini*, Silone's *Bread and Wine*. The background will be approached in informal group discussions.

sions. Exclusion: ITA390Y.

ITA272H Pirandello and the Modern Italian Theatre (In English)

26L

(Offered in alternate years)

The problem of conflicting realities and of the definition of the personality in the plays of Pirandello. Works by Betti and De Filippo (including *Marriage Italian Style*) will also be read. All texts and discussions will be in English.

ITA275Y

The Culture of the Italian Renaissance (In English) (Offered in alternate years) 52L, 26S A survey of the art forms, social ideals and intellectual ideology of the Italian people in the fifteenth and sixteenth centuries, with some attention also given to the political and economic conditions of the period. Artists, writers and philosophers, whose major works will be considered, include: Michelangelo, Leonardo da Vinci, Castiglione, Machiavelli, Cellini, Pico della Mirandola. Slides, records and other illustrative materials will be used.

ITA321Y Dante's Divina Commedia

52L, 26T

An introduction to the work and thought of Dante, with special emphasis on the *Inferno* and *Purgatorio*. *Prerequisite*: ITA200Y/210Y.

ITA324Y Renaissance Prose and Poetry

52L, 26T

An examination of treatises by Machiavelli, Castiglione, and Guicciardini, and poems by Lorenzo de' Medici, Poliziano, and Michelangelo, in relation to trends in Renaissance thought and the new concept of man and the world. Exclusion: ITA323H. Prerequisite: ITA200Y/210Y/340Y.

- ITA325H Leopardi's Canti (Formerly ITA324H)(Offered in alternate years) 26L, 13T A close reading of the poetry of Italy's finest lyric poet in the light of his prose writings and within the context of Classical and Romantic traditions. Prerequisite: ITA200Y/210Y.
- ITA326H Petrarca (Offered in alternate years) 26L, 13T A study of Petrarca's poetry with some consideration of his influence on Italian and other literatures. Prerequisite: ITA200Y/210Y.
- The Cinema of Antonioni and Fellini (Offered in alternate years)

  52S, 52P

  Both directors will be studied in depth. Particular attention will be devoted to showing how they resolved the technical transition from black and white to colour and how their cinematic mythologies evolved. Since they bridge the gap between neo-realism and contemporary ideologies their influence on the current generation of Italian directors such as Bertolucci will also be demonstrated. Readings will include shooting scripts and technical and theoretical writings on the cinema. Prerequisite: ITA240Y.
- ITA340Y Creative Italian (I) 52L, 26P
  Advanced language course designed to give the student oral and written proficiency.
  Selected readings on questions of topical interest, discussions, compositions, some translation. Prerequisite: ITA200Y/210Y.
- ITA371Y Advanced Translation(Formerly ITA355Y) 26L, 52P
  Techniques and theories of translation, using modern texts containing a variety of linguistic codes. Some simultaneous translation. *Prerequisite*: ITA340Y.
- ITA390Y

  20th-Century Novel and Drama (Formerly ITA360Y)(Offered in alternate years) 52L, 26S

  Masterpieces of modern Italian fiction and drama analyzed against the background of
  modern-day Italy. One work will be examined in detail from each of the following novelists
  and playwrights: Svevo, Vittorini, Buzzati, Calvino, Pirandello, Betti and De Filippo.

  Prerequisite: ITA200Y/210Y.
- ITA395H Major Novels of the 19th-century (Offered in alternate years)

  A study of the genesis and evolution of the Italian novel, with a close reading of Alessandro Manzoni's *I promessi sposi* and Giovanni Verga's *I Malavoglia*. *Prerequisite*: ITA200Y/210Y.
- ITA427H

  Boccaccio (Offered in alternate years)

  A critical portrait of one of "the three crowns of Florence" through an examination of representative selections from his minor works and a detailed analysis of his masterpiece, the Decameron. Prerequisite: ITA200Y/210Y.
- The 18th-century in Italy (Offered in alternate years)

  An investigation of the intellectual trends and literary forms in Italy from the preenlightenment to Romanticism. Readings from the works of Vico, Muratori, Gravina, Metastasio, Rolli, Parini, Verri, Beccaria, Goldoni, Alfieri and others. *Prerequisite*: ITA200Y/210Y.
- ITA450Y

  Advanced Composition (Offered in alternate years)

  Analysis of expressive strategies and discussion of problems relating to syntax, morphology and vocabulary as they arise from individual compositions and essays. *Prerequisite*: ITA210Y/340Y.

## JOINT COURSES

JBG230Y Man and Environment (Formerly JBG130Y) 52L, 26T

(I) Past and present man-environment relationships are examined; principles of ecology, environmental ethics and esthetics are outlined; crucial alternatives for man are discussed. Problems of current environmental concern - land use, material and energy resources, pollution are considered and illustrated by case studies from different parts of the world. Given by the Departments of Biology and Geography. Exclusion: GGR101Y, BIO130Y, JBG130Y.

JBP359Y Sociobiology: Biological Bases of Social Behaviour

56L, 78P

Concepts from ethology, ecology, and population biology will be introduced and applied to the understanding of the evolution and biological function of social behaviour. Topics to be discussed will include altruism, aggression, social spacing, dominance, sex, parental investment and care, social symbioses, and the evolution of life histories. Emphasis will be placed on the complex social systems of insects and mammals. Laboratory sessions will involve field observations, laboratory demonstrations, and the preparation of individual projects. Given by the Departments of Biology and Psychology. *Prerequisite*: BIO100Y and PSY100Y.

JGP334H

Physics of the Earth

26L,13T

A course dealing with the quantitative physical desciption of the earth, its dynamics, internal structure and tectonic history. Topics covered in detail are: radioactivity and radiometric dating of rocks; the rotation and dynamics of the earth; the earth's gravitational and magnetic fields; ancient magnetic fields; and seismological evidence for the internal structure and composition of the earth. Extensive use is made of potential field methods and solution of partial differential equations. Given by the Departments of Geography and Physics. *Prerequisite*: PHY231Y. *Recommended preparation*: EPS100H/120Y/236H.

JGS340Y

Concepts, Methods and Values in Urban Studies

52L, 26T

Designed for students concentrating in urban studies irrespective of major disciplinary area. A survey of a variety of types of urban study from the social science perspective. Linkages between the ways in which urban phenomena and processes are conceptualized, the methods employed to study them and the often implicit system of values in which such investigations are framed. Urban researchers, both academic and applied, will be invited to discuss their research in the context of these issues. Given by the Departments of Geography and Sociology. *Prerequisite*: SOC205Y/GGR245Y and SOC200Y/201Y/(GGR202H, 207H, 280H).

#### LATIN

(See Classics)

LAT100Y Introductory Latin

104S

A course designed to acquaint the student with the essentials of the Latin language and to introduce him to Roman literature.

LAT210H (I) The Poetry of Catullus

39S

Selections from the work of Catullus, including both the love poetry and the poetry of social comment with particular emphasis on the literary value of Catullus' work; includes study of the Latin language. *Prerequisite*: Grade 13 Latin/LAT100Y/130Y(G).

LAT211H (I) The Poetry of Horace

39S

Selections from the *Odes* of Horace, with particular emphasis on the literary quality of Horace's lyric poetry; includes study of the Latin language. *Prerequisite*: Grade 13 Latin/LAT100Y/130Y(G).

LAT228Y

Introduction to Roman Law (Offered in alternate years)

52T

(I) The purpose of this course is to improve the Latin of students with some interest in law. The reading will be selections from the second century A.D. textbook of Roman law, the *Institutes* of Gaius, which divides its subject into the law of persons, the law of things and the law of actions. Schultz' Classical Roman Law will be used for reference. The course will include some lectures on the history of Roman Law. Prerequisite: Grade 13 Latin/LAT100Y/130Y(G).

### **LINGUISTICS**

The aim of Linguistics is to develop an understanding of how all languages work, and of how languages use disparate means for the same effects. The theme is the unity and the variety of human language. Such a theme subsumes many variations, including grammatical theory and its application to data, language divergence and convergence in space and time, the sociocultural stratification of linguistic systems, normal and pathological language behaviour and language learning.

Undergraduate Linguistics is a valuable component of a liberal education, especially in a multi-lingual country such as Canada. It is also valuable as pre-professional training for people interested in teaching English, French or other languages, in areas of rehabilitative medicine such as audiology or speech therapy, in special education, in work with native peoples or with immigrant groups in our society, in religious and missionary work, or in academic disciplines such as psychology, philosophy, literature and language studies, where the contribution of linguistics is increasingly recognized as important.

Students interested in linguistics should consider the following: ENG200Y, FRE272Y, MAT104H, PHL245H, PSY315H, PSY323H, PSY374H, PSY393H, SOC152Y, SOC308H, SOC309Y, SPA425H.

## LIN100Y Introduction to General Linguistics

52L, 26T

Aims at describing certain universals in the phonological, morphological, syntactic and semantic structures of language. The principal purpose is not indoctrination into any particular school of linguistic thought but rather to acquaint students with the various possibilities of analyzing the components of language. Since the primary goal is to serve as a valuable tool for students of English and foreign literatures, languages, psychology, anthropology, sociology, communications, etc., the course uses a multi-disciplinary approach.

#### **MATHEMATICS**

(See also Applied Mathematics)

Faculty Advisor: Professor T. Bloom

Mathematics historically was concerned with concrete notions of space and number. From these concrete notions have evolved such abstract ideas as "set" and "group" which form the subject matter of contemporary Mathematics, and Mathematics today may be considered as the art or science of making deductions from given statements. The deductions themselves and the methods used to make them, come within the scope of Mathematics, while the original statements (hypotheses) largely lie outside. The observation that the results deduced apply to any collection of objects and relations that satisfy the hypotheses is the key to the immense power and surprisingly wide utility of Mathematics.

There are many different motivations for the study of Mathematics. To the humanist, Mathematics is part of the mainstream of human culture. To the scientist, engineer, or social scientist it is an important working tool. To the mathematician, it is an end in itself. The Department of Mathematics attempts to provide courses to suit all these diverse viewpoints.

The pure mathematician is interested in abstract mathematical structures in their own right. He is guided by considerations of taste, beauty, and rigour and may view his subject as an art. The main fields of pure Mathematics are algebra, analysis, geometry, topology, and foundations.

The applied mathematician is more interested in how he can use those structures to study some aspect of the world around him. Applied Mathematics, originally used to describe the application of Mathematics to certain classical fields of Physics, today includes such fields as optimization theory, communication theory, combinatorics, theory of games, and numerical analysis. (Such areas as programming languages and automata form part of the rapidly growing subject of Computer Science. Although historically the main applications of Mathematics have been to physical sciences, contemporary Mathematics has significant utility for nearly all sciences and for such diverse subjects as Economics and Linguistics. Mathematics is the language of precise thought.

The professional mathematician is most likely to find employment in universities, in the civil service or in government laboratories, and in financially or technologically oriented business firms. Research positions require post-graduate study. A training in Mathematics has traditionally been a strong preparation for careers in law and business; today it is an excellent foundation for further work in a wide variety of fields in the sciences and social sciences, especially when the interplay of many complex factors is involved.

The Specialist Programme in Mathematical Sciences is recommended to students who want a deep knowledge of the subject, such as those who are contemplating graduate work in Mathematics, including Applied Mathematics or Mathematical Physics. The programme is highly recommended as preparation for teaching in secondary schools. Mathematics can also be combined with other fields of study, such as Actuarial Science, Biology, Chemistry, Economics, Linguistics, Philosophy, Psychology or Statistics.

The sequential nature of Mathematics means that prerequisites are essential in many courses and steady work is usually required. Students are advised to consult the prerequisites of courses in which they may be interested in subsequent years. A student who wishes to take a course in Mathematics for which he lacks the required prerequisite may be permitted to do so if, in the opinion of the Department, he demonstrates adequate preparation for the course.

First year students with adequate preparation who want a substantial mathematics course either for its own sake or in conjunction with another field of study are advised to take MAT138Y.

Erindale College offers a range of courses sufficient for specialization in Mathematics.

Please see Section 7 for details of Programme Requirement.

MAT104H Symbolic Logic (Formerly MAT204H)

26L, 13T

Propositional calculus. Predicate calculus. The aims of the course are to develop a clear understanding of logical concepts and to acquaint students with proof techniques. *Exclusion*: PHL245H.

MAT105Y Introduction to Algebra and Calculus (Formerly MAT110Y)

52L, 26T

Vectors, linear equations, matrices, trigonometric and logarithmic functions, limits, derivatives, extreme values, integrals and applications. *Exclusion*: Grade 13 Mathematics C.

MAT108H Introductory Linear Algebra (Formerly MAT208H)

26L, 13T

Systems of linear equations; rank and nullity. Determinants. Vectors in 2 and 3 dimensions; transformations, area and volume. Matrices. Elementary geometry of complex numbers. Properties of the roots of polynomials. *Exclusion*: MAT225Y(G).

MAT132Y Calculus

52L, 26T

Techniques of differentiation and integration. Calculation of limits. Related rates. Extreme values. Graph sketching. Applications of calculus. Complex numbers. Sequences and series. Elementary linear algebra and partial derivatives. *Exclusion*: MAT110Y, 130Y, 133Y, 134Y, 135Y, 138Y, 139Y, 149Y, 150Y. *Prerequisite*: Grade 13 Mathematices R & F and C/MAT105Y.

MAT138Y Calculus

52L, 52T

Basic concepts of calculus: number systems, the derivative, the integral, the fundamental theorem, improper integration and limits. Techniques of differentiation and integration with applications. Construction of exponential and logarithmic functions. Calculus of vector functions. Sequences and series: convergence tests, power series, Taylor's theorem. This course is more intensive than MAT132Y. *Exclusion*: MAT110Y, 130Y, 132Y, 133Y, 134Y, 135Y, 139Y, 149Y, 150Y. *Prerequisite*: Grade 13 MAT A, R & F and C/MAT105Y.

MAT214H Differential Equations

26L, 13T

Ordinary differential equations. Emphasis throughout on applications. Exclusion: APM251Y, MAT230Y(G), 234Y, 235Y, 244H(G). Prerequisite: MAT132Y/138Y.

- MAT228H Linear and Multilinear Algebra 26L, 13T Introduction to vector spaces. Linear transformations and eigenvalues. Quadratic forms and the spectral theorem. Geometric interpretations. Exclusion: MAT224H, 225Y. Prerequisite: MAT108H/208H or (Grade 13 Algebra and MAT138Y).
- MAT233H Calculus of Several Variables(MAT233H and MAT214H replace MAT235Y) 26L, 13T Differential and integral calculus of several variables: partial differentiation, chain rule, Taylor series and classification of critical points. Multiple integrals, line and surface integrals, vector calculus, Green's theorem. *Exclusion*: MAT230Y, 234Y, 235Y, 239Y, 250Y. *Prerequisite*: MAT132Y/138Y.
- MAT234Y Advanced Calculus For Social Scientists 52L, 26T Sequences and series. Differential calculus for functions of several variables. Taylor series in one and many variables. An introduction to integral calculus for functions of two variables. An introduction to optimization; extremal problems. Langrange multipliers; linear programming. Difference and differential equations emphasizing linear systems. Applications to economics and Markov chains. Exclusion: MAT214H, 230Y, 233H, 235Y, 239Y, 250Y. Prerequisite: MAT132Y/138Y.
- MAT239Y Advanced Calculus 52L, 26T Sequences and series. Uniform convergence. Convergence of integrals. Elements of topology in R<sup>2</sup> and R<sup>3</sup>. Differential and integral calculus of vector-valued functions of a vector variable, with emphasis on vectors in two and three dimensional Euclidean space. External problems, Lagrange multipliers, line and surface integrals, vector analysis, Stokes' theorem, Fourier series, calculus of variations. *Exclusion*: MAT230Y, 233H, 234Y, 235Y, 250Y. *Prerequisite*: MAT138Y/139Y.
- MAT304H Intermediate Logic (Offered in alternate years) 26L, 13T A continuation of MAT104H, treating the soundness and completeness of predicate logic. Metamathematics. Exclusion: PHL345H. Prerequisite: MAT104H/204H.
- MAT308H Philosophy of Mathematics (Offered in alternate years)

  26L, 13T

  Wittgenstein's approach to mathematics: proof, indirect proof, arithmetic induction, contradiction. Constructive mathematics: integers, Brouwer's approach to the intermediate value theorem etc., the fan theorem. Platonistic mathematics: law of the lever and parallelogram of forces. Origins of set theory and analysis. Prerequisite: Any second year MAT course or equivalent.
- MAT310H Set Theory: An Introduction (Offered in alternate years)

  The mathematical theory of sets. The classical paradoxes. The concept of infinity.

  Prerequisite: MAT228H/239Y.
- MAT328H Introduction to Differential Geometry

  Curves in R<sup>2</sup> and R<sup>3</sup>: arc length, curvature, torsion, Hopf's theorem, Frenet's equations, the main theorem. Surfaces in R<sup>3</sup>: first and second fundamental forms, Gauss curvature and mean curvature, the Bonnet immersion theorem. *Prerequisites*: MAT228H, 233H/234Y/235Y/239Y.
- MAT329H Geometric Structures (Offered in alternate years)
  A survey course in geometry touching on elementary geometry from an advanced point-of-view, geometric transformations, geometric invariants, Euclidean, projective, affine, and non-Euclidean geometries. Prerequisite: MAT239Y/328H.
- MAT334H Complex Variables

  Theory of functions in one complex variable; analytic and meromorphic functions; Cauchy's theorem, residue calculus, conformal mappings; introduction to analytic continuation, harmonic functions. Exclusion: MAT319H, 330Y. Prerequisite: MAT239Y/250Y.
- MAT338H Introduction to Real Analysis

  Metric spaces, completeness, uniform convergence. Topics in measure theory; Lebesque integral, Riemann-Stieltjes integral, L<sup>p</sup> spaces, Fourier series. Exclusion: MAT350Y.

  Prerequisites: MAT228H, 239Y.

MAT344H Introduction to Combinatorial Mathematics (Offered in alternate years) 26L, 13T Basic counting principles. Inversion formulas, principle of inclusion-exclusion. Generating functions. Permutations with restrictions. Graph theory and applications. Prerequisite: MAT228H.

MAT349H Abstract Algebra 26L, 13T Introduction to groups, rings, and fields. Exclusion: MAT300Y. Prerequisite: MAT228H.

MAT359H Introduction to Topology (Offered in alternate years)

Topics selected from point-set, geometric, and algebraic topology. Prerequisite: MAT239Y/250Y.

A prospective student should select his topic and advisor before the end of second year and discuss the topic with his advisor. *Prerequisite*: Acceptance by an advisor.

MAT406H Advanced Topics in Mathematics I(Offered in alternate years) 26L. 13T

Independent Work in Mathematics

Advanced Topics in Mathematics I(Offered in alternate years) 26L, 13T A selection of topics for advanced undergraduates. Students should consult the department for details and prerequisites.

MAT407H Advanced Topics in Mathematics II(Offered in alternate years) 26L, 13T A selection of topics for advanced undergraduates. Students should consult the department for details and prerequisites.

## **PHILOSOPHY**

**MAT399H** 

Faculty Advisor: Professor E. Kremer

ERINDALE PHILOSOPHY HANDBOOK. Because of space and time restrictions, the Calendar gives only brief and abstract descriptions of courses. The Philosophy Handbook, which is produced in the spring, gives detailed information on course outlines, requirements, reading, instructors, time-tabling, etc. It is available at the Philosophy Department, Room 235 North Bldg. phone 828-5290, or will be mailed on request. It is an essential supplement to the Calendar and students are urged to consult it.

The Philosophy Discipline Representative and staff will be glad to offer advice and assistance. To arrange for counselling, by a faculty member, phone 828-5290.

The Greek words from which "philosophy" is formed mean "love of wisdom" and all great philosophers have been moved by an intense devotion to the search for wisdom. What distinguishes philosophy from the physical and social sciences is its concern not only with the truths which are discovered by means of specialized methods of investigation, but with the implications such discoveries have for human beings in their relations with one another and the world. Moreover, philosophy has an abiding interest in those basic assumptions about the nature of the physical and social world, and about the nature of inquiry itself, which underlie the methodology by means of which scientists seek to explain their observation.

Philosophy examines the grounds for those beliefs which make up people's fundamental views of the world. Here are a few fundamental beliefs, some held by some people, some by others:

"Telling lies is always wrong", "Some things can never be known", "The material world is all that exists", "What is right or wrong depends entirely on one's society or culture", "People are inherently selfish", "Life must have a transcendent purpose". There are many other similar beliefs which deeply affect the way we think and live. Philosophers discuss them as thoroughly and systematically as possible.

The Philosophy Department offers courses which study basic works of famous philosophers of the past taken in their historical settings, and it offers courses in which students are trained to think critically about philosophical issues themselves. A glance through the courses offered in Philosophy will inform any prospective student of the names of philosophers studied, and the special areas investigated in the Philosophy programmes at the University of Toronto. A dictionary or encyclopedia will supply the standard definition of logic, ethics, epistemology, and metaphysics. But whoever wants to know what philosophy is must do it. A student can learn a great deal from a study of what has been written by the great philosophers through history. But such study is only an important preliminary. To read without bold and critical thinking is next to useless.

Some students may not wish to undertake more than a few courses in philosophy to supplement their work in other fields. They may make a free choice among the courses offered by the Department. The only restrictions are that they take no more than one 100-level course and that 300- and 400-level courses presuppose previous work in philosophy. All courses at the 200-level are open to any student. Many students will find that their interests embrace philosophy and some other subject. The Philosophy Department has joint programmes with various departments. Other students will find that their primary interest is in philosophy. The Specialist Programme is designed for such students. Its completion may be a step toward graduate study in philosophy, or it can lead in other directions; law, journalism, education, theology, and politics are some possibilities. It cannot be stressed too strongly, however, that one of the chief rewards of studying philosophy must always be intrinsic to the subject itself.

Please see Section 7 for details of Programme Requirement.

PHL100Y Logic, Knowledge, and Reality

781.

An introduction to the areas of philosophy, emphasizing logic, theory of knowledge, and metaphysics. Elementary techniques of modern symbolic logic and problems in inductive logic and probability. What can be known with certainty? What is reality? Are there limits to knowledge? *Exclusion*: PHL101Y, 102Y, PHI103Y, 104Y, 105Y.

PHL101Y God, Mind, and Value

78L

An introduction to philosophy, stressing conceptions of human nature and of the good life. The religious dimension of life; arguments for the existence of God; free will; mind and body in relation to the scientific image of human nature; the question of a rational foundation for morality; the relation of individual to state; authority, liberty, and justice. *Exclusion*: PHL100Y, 102Y, PHI103Y, 104Y, 105Y.

PHL102Y

Philosophical Classics

78L

A historical introduction to philosophy, including philosophers such as Plato, Aristotle, Aquinas, Descartes, Berkeley, Hume, Mill, Nietzsche, Russell. *Exclusion*: PHL100Y, 101Y, PHI103Y, 104Y, 105Y.

PHL200Y

Birth of Western Philosophy

78L

Classical doctrines of Plato and Aristotle concerning the universe and God, human knowledge and logic, soul and body, moral values and the good life. Plato's predecessors, the pre-Socratics and Socrates, and post-Aristotelian developments in Stoicism, Epicureanism and neo- Platonism.

PHL210Y

17th and 18th Century Philosophy

78L

Classic texts by European philosophers (e.g. Hobbes, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant.) Their attitudes toward science and religion, and their theories about the nature of the world and of human knowledge, culminating in the "Copernican Revolution" of Kant. Recommended preparation: PHL100Y.

PHL215H

Schopenhauer, Nietzche and Kierkegaard

39L

Three dissenters from the ideology of progress: Schopenhauer's rationale for pessimism, Kierkegaard's view of faith, Nietzche's arguments on the relation of values to power and will.

PHL220H Introduction to Existentialism

391. Existentialists reject the belief in a fixed human nature and hold that the individual creates value by free choice typical authors include: Kierkegaard, Dostoevski, Heidegger, Jaspers, Sarte and Camus.

PHI.230H Knowledge, Belief, and Truth 39L

An introduction to epistemology: the nature and scope of human knowledge. Perception, meaning, evidence, certainty, skepticism, belief, objectivity, and truth, Readings from both historical and contemporary thinkers.

PHI.231H **Existence and Reality**  391.

An introduction to metaphysics: conceptions of the overall framework of reality. Typical problems: existence and essence; categories of being; mind and body; freedom and determinism; causality; space and time; God.

PHI 234H Miracles, Mysticism, and the Paranormal 39T.

Metaphysical and epistemological problems raised by claims about such issues as miracles, mysticism, extrasensory perception, psychokinetic powers, and altered states of consciousness.

PHL235H Philosophy of Religion

The nature of religion; religious faith; arguments for God's existence; religious experience; religion and human autonomy; the problem of evil; religious and atheistic existentialism, Exclusion: PHI236Y.

PHL240Y Philosophy of Human Nature 39L

An introduction to the philosophy of mind. Consciousness and the body; personal identity and survival; knowledge of other minds; free will and the nature of human action.

PHI 241H Philosophy of the Emotions

Typical problems studied: Can emotions be assessed as rational or irrational? Do we have immediate knowledge of our emotions? Are emotions right or wrong in themselves? Are we responsible for them? How do our socialized emotional repertoires condition our conception or ourselves, including our gender identity? Do they encourage harmful sterotypes?

PHL243H

Philosophy of Human Sexuality

Philosophical issues about sex and sexual identity will be considered in the light of biological, psychological, and ethical theories of sex and gender. Some typical issues: the analysis of the concept of gender; male and female sex roles; theories of psycho-sexual development; sexual morality; "natural", "normal" and "perverse" sex; sexual liberation; love and sexuality.

PHI.244H

**Human Nature and Abnormality** 

An application of methods and theories in philosophy to controversies concerning such issues as the criteria of sanity, normality, or rationality; intelligence and intelligence testing; male-female sex roles; homosexuality; alienation; or other issues.

PHL245H

Modern Symbolic Logic

The application of symbolic techniques to the assessment of arguments. Propositional calculus and quantification theory. Logical concepts; techniques of natural deduction. Exclusion: MAT104H, 204H.

PHL246H

**Probability and Inductive Logic** 

391.

The elements of axiomatic probability theory, and its main interpretations (frequency, logical, subjective). Reasoning with probabilities in decision making and science.

PHL250H Philosophy of Language 39L

The nature of language as a system of human communication, theories of meaning and meaningfulness, and the relation of language to the world and to the human mind.

PHL255H	Philosophy of Science	39I.
111111111111	Philosophical attempts to understand and systematize the implications of advances in	
	physical, social and life sciences: explanation and theory; induction and evidence; ca	use
	and effect; space and time; purpose, motive, and freedom.	

- PHL265H Introduction to Political Philosophy 39L Some main problems of political philosophy; anarchism and the legitimacy of the state; the evaluation of forms of government; liberalism and the limits of state authority; the justification of civil disobedience and revolution; social justice.
- PHL266H Political Theories
  Some texts of major authors will be studied comparatively, critically, and against the background of their times. Ancient or Medieval writings (Plato, Aristotle, or Augustine) on citizenship, the state, power, rights, and the economy will be contrasted with the approach of some modern authors (such as Machiavelli, Hobbes, Marx).
- PHL271H Ethics and the Law
  This is a course in applied ethics: ethical theories such as those of Kant and contemporary utilitarians; the criteria of motive and consequences, freedom of the will, degrees of responsibility, civil disobedience. Examples within the Canadian legal system.
- PHL272H Philosophy of Education
  The nature, aims, and content of education; learning theory; education and indoctrination; the teaching of morals and the morality of teaching; the role and justification of educational institutions, their relation to society and to individual goals; authority and freedom in the school.
- PHL274H Contemporary Social Issues

  Against the background of some major social and political theories, this course will explore such practical problems as nationalism, racism, sexism, inequality, civil disobedience, revolution, and political radicalism.
- PHL275H Introduction to Ethics 39L
  Typical topics: relativism; the nature and limits of moral responsibility; the relation between self-interest and morality; the nature of moral theories.
- PHL281H Morality, Medicine, and the Law
  Moral implications of recent developments in medicine and the life sciences; related legal and social issues. Euthanasia, health care priorities, abortion, fertility control against the background of some major ethical theories.
- PHL282H Ethics, Health Science, and the Law
  Moral implications of recent developments in medicine and the life sciences; related legal
  and social issues. Experimentation on human subjects, transplants, behaviour modification, and genetic control, against a background of some major ethical theories.
- PHL284H Contemporary Moral Issues
  An application of ethics to controversies concerning such issues as abortion, euthanasia, war, censorship, norms of sexual behaviour.
- PHL285H Aesthetics 39L
  Some central areas in philosophy of art such as the nature of a work of art; definitions and theories of arts, aesthetic experience, perception and sensibility; objectivity in criticism; standards of taste or evaluation.
- PHL288H Literature and Philosophy 39L
  The literary expression of philosophical ideas and the interplay between literature and philosophy.
- PHL312H Kant 26S A systematic study of *The Critique of Pure Reason. Prerequisite:* PHL210Y.

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26S

	The critical study of an important text. <i>Prerequisite</i> : PHL210Y.
PHL315H	19th-Century German Philosophy 26S Post-Kantian idealism in Fichte, Schelling, and Hegel, and the reactions against it of Kierkegaard, Marx, and Nietzche. <i>Prerequisite:</i> PHL312H.
PHL316H	Hegel 39L Central problems in Hegel's philosophy. <i>Prerequisite</i> : PHL312H.
PHL317H	Issues in 19th Century Philosophy 26S A theme in several 19th Century philosophers or some aspect of a philosopher's work not typically covered in other courses. <i>Prerequisite</i> : 300 level work in the relevant area.
PHL320H	Phenomenology 26S Phenomenological method examined through a problem or through a study of some philosopher(s), e.g., Meinong, Husserl, Merleau-Ponty. <i>Recommended preparation:</i> PHL210Y, 312H.
PHL321H	Existentialism 26S Existential philosophy examined through a problem or through a study of some philosopher(s), e.g. Heidegger, Sartre, and Marcel. <i>Recommended preparation</i> : PHL320H.
PHL326H	Wittgenstein (Alternates with PHL350H)  Wittgenstein's views on the structure and function of language, meaning, the possibility of a private language, and the concepts of feeling and thinking. The Tractatus Logico-Philosophicus and the Philosophical Investigations. Recommended preparation: PHL210Y, 245H.
PHL327H	Contemporary Analytic Philosophy 26S Problems in analytic philosophy, stressing new directions and some recent controversies. <i>Prerequisite</i> : PHL245H.
PHL332H	Issues in Metaphysics 26S Typical problems: ontological categories; ontological commitment; the objectivity of space and time: causality and determinism; mind and body.
PHL333H	Issues in Epistemology 26S Typical problems: knowledge and belief, perception, the analytic-synthetic distinction, theories of truth, necessity and the <i>a priori</i> .
PHL335H	Issues in Philosophy of Religion 26S Some specific problem(s) in the philosophy of religion, such as religious paradox, the ontological argument, theories concerning God's transcendence, and human freedom in relation to God. <i>Prerequisite:</i> PHL235H.
PHL340H	Issues in Philosophy of Mind (Alternates with PHL341H) 26S Typical problems: the brain-mind identity theory; intentionality and the mental; personal identity; the nature of human action. <i>Recommended preparation</i> : PHL240Y.
PHL341H	Freedom, Responsibility, and Human Action (Alternates with PHL340H) 26S Human action and the nature of freedom and responsibility in the light of contemporary knowledge concerning the causation of behaviour. Recommended preparation: PHL240Y.

Can machines think and feel? Are human beings very complicated biochemical devices? These questions are dealt with in the light of recent research and discussion on the

simulation of intelligence and purposive behaviour. Prerequisite: PHL245H.

PHL313H Issues in Modern Philosophy

PHL342H

**Minds and Machines** 

PHL344H	Metalogic Soundness and completeness of propositional and quantificational logic, undecidal quantificational logic, and other metalogical topics. <i>Exclusion:</i> MAT304H. <i>Prere</i> PHL245H/MAT104H/204H.	
PHL345H	Intermediate Logic A sequel to PHL245H, developing skills in quantificational logic and treating of descriptions. The system developed will be used to study a selection of the fotopics: philosophical uses of logic, formal systems, set theory, non-classical logimetalogic. <i>Prerequisite:</i> PHL245H/MAT104H/204H.	llowing
PHL346H	Philosophy of Logic and Mathematics (Alternates with PHL347H) Platonism versus nominalism the relation between logic and mathematics, epistemi implications of Gödel's and Church's theorems, counter factuals, necessity and posextensional and intensional contexts, synonymy, intuitionism, constructivity. Example 2008. Prerequisite: PHL245H/MAT104H/204H.	ssiblity,
PHL347H	Many-Valued and Modal Logics (Alternates with PHL346H) Many-valued and modal propositional logics and their interrelations; logical matri possible-world semantics; problems of interpretation and philosophical applic Exclusion: MAT312H. Prerequisite: PHL245H/MAT104H/204H.	
PHL350H	Philosophy and Grammar (Alternates with PHL326H) The claims of Logical Positivism, "Oxford Philosophy", Structuralism, or Generative Linguistics about the relevance of grammar to philosophy. The ratio going from structural considerations to philosophy. The rationale of going from structural considerations to hypotheses about mind, metaphysics, and meaning. Recompreparation: PHL250H.	onale of ructural
PHL365H	Contemporary Political Theory (Alternates with PHL375H) Some important twentieth-century writings. <i>Prerequisite</i> : One of PHL265H, PHL	26S .266H.
PHL370H	Issues in Philosophy of Law A selection of issues and texts.	26S
PHL372H	Issues in Philosophy of Education A selection of issues and texts. <i>Prerequisite</i> : PHL272H.	26S
PHL373H	Moral Education  A study of moral development, moral and values education and the moral and implications of the teaching of morals. Topics will be examined against the backgr some major theories in moral philosophy. <i>Prerequisite</i> : PHL272H.	
PHL375H	Contemporary Ethical Theory (Alternates with PHL365H) A selection of issues and texts. <i>Prerequisite</i> : PHL275H.	26S
PHL396H/39	97H/398H/399H Special Topics	26S
PHL400H	Advanced Topics in History of Philosophy	26S
PHI 410H	Advanced Tonics in Problems of Philosophy.	26S

PHL445H Advanced Topics in Logic

Exclusion: MAT402H. Prerequisite: PHL245H/MAT204H, PHL345H/MAT304H.

PHL496H/497H/498H/499H Individual Studies

### **PHYSICS**

Faculty Advisor: Professor R.M. Farquhar

Physics was born of a desire to understand nature in a quantitative way. Guided by experiment and intuition, physicists arrive at mathematical relationships among various quantities. These relationships are then tested experimentally and extended by further research. The physics courses offered at Erindale are designed to help students both to understand and to use the concepts and relationships which have been developed, and to appreciate the need for continual questioning of scientific theories. The non-science student should gain insight into the nature of scientific investigation, while the student whose interest is in sciences other than physics should acquire a background knowledge leading to a deeper understanding of his own discipline. Students intending to specialize in physics will meet a broad programme of courses which will prepare them for advanced study.

The present programme in Physics at Erindale College employs the most up-to-date demonstration apparatus and undergraduate facilities. It has been designed to meet the diverse needs of the physics students of the College.

Students wishing to specialize in physics should consult a physics professor.

Recommended first-year programme:

First year students are enrolled in a combined PHY118Y/140Y course with common lectures and laboratories in the fall term. Students with a minimum of 70% at Christmas are eligible for PHY140Y and are strongly encouraged to enroll in PHY140Y for the spring term.

i) for physics and science specialists

PHY140Y, MAT138Y(MAT132Y may be acceptable for some programmes).

ii) for pre-meds, general interest, etc. PHY118Y, MAT132Y/138Y.

Second Course in Physics:

PHY210Y is recommended for students in Biology, Geography, Anthropology and, in general, anyone who wishes a second course in physics.

PHY220H is recommended for students in Survey Science.

Please see Section 7 for details of Programme Requirement.

### PHY118Y World of Physics

78L, 39P, 26T

Recommended for students interested in a general survey course in physics. An overview of physics is presented starting from its classical foundations, through its evolution to the present and on to some of the challenges which lie ahead. Topics include: kinematics and dynamics of particles; special relativity; forces; work and energy; conservation laws; electricity and magnetism; nuclear and elementary particle physics. NOTE: Students with a minimum of 70% at Christmas are strongly encouraged to transfer enrollment to PHY140Y for the spring term. PHY118Y is a prerequisite for PHY210Y only. Entrance from PHY118Y into other second year physics courses requires a minimum final mark of 70% in PHY118Y and permission of instructor. *Exclusion*: PHY140Y. *Prerequisite*: Grade 13 MAT, R&F/C. *Corequisite*: MAT132Y/138Y.

26S

PHY140Y Principles of Physics

78L, 39P, 26T

Designed to provide science students with a thorough quantitative foundation in physics and experience in applying physical principles. The course is a systematic development of classical and relativistic mechanics and their application to current problems in different sciences. Topics include: forces, statics, kinematics in two- and three-dimensions; special relativity, momentum, energy conservation laws, particle dynamics, gravitation; systems of particles, rotational motion, relativistic dynamics, oscillations. This material will be discussed with applications to problems in elementary particle physics, nuclear physics, geophysics and other sciences.

NOTE: A minimum mark of 70% at Christmas will be required to continue PHY140Y for the spring term. Students not qualifying in this way must transfer to PHY118Y for the spring term. Exclusion: PHY118Y. Prerequisite: Grade 13 PHY, Grade 13 MAT, R&F, C. Corequisite: MAT132Y/138Y. Recommended preparation: Good standing in Grade 13

physics and mathematics.

PHY210Y Applied Biological and Medical Physics

52L, 26T

A course of selected examples from applied physics having particular importance to biophysics, medicine and engineering. Calculus will be used to solve problems. Topics include: electricity and magnetism; optics, the electrical activity of nerves; fluid flow and the circulatory system; biomechanics and the strength of materials; x-rays; radioactivity and nuclear medicine.

NOTE: This course cannot be used for credit towards a specialist programme in physics. *Exclusion*: PHY220H. *Prerequisite*: PHY118Y/140Y, MAT132Y/138Y.

PHY220H

**Applied Physics and Optics** 

26L, 13T

An introduction to problems in optics and applied physics primarily intended for students enrolled in physics (optional) or survey science. The course consists of the first half of PHY210Y followed by a separate final examination. Emphasis will be placed on solving problems selected from the following topics: optics; electicity and magnetism; biomechanics and the strength of materials; fluid flow. Related biological examples will also be discussed. Exclusion: PHY210Y. Prerequisite: PHY118Y/140Y, MAT132Y/138Y.

PHY224H

**Technique of Physical Measurement** 

26L, 78P

A course designed to familiarize students with some of the basic laboratory measurements and techniques used in research and development in fundamental physics and in industry. To include experimentation and instrumentation in optics, nuclear radiation physics, properties of materials and electronics. *Prerequisite*: PHY118Y(with a minimum of 70% & P.I.)/140Y/CHM150Y. *Corequisite*: Any 200 level PHY course.

PHY231Y

Electromagnetism

52L, 12P, 26T

An introductory course in electricity and magnetism. Topics include: Gauss's Law and electrostatics; DC circuits and instruments; AC circuits and resonance; magnetostatics and Faraday's Law; introduction to Maxwell's equations; electromagnetism in material media. Vector analysis will be introduced as required and a working knowledge of calculus and elementary differential equations is assumed. *Prerequisite*: PHY(118Y with a minimum of 70% & P.I.)/140Y, MAT132Y/138Y. *Corequisite*: APM251Y/MAT235Y/239Y.

PHY254H

Statistical Physics

26L, 13T

The purpose of this course is to provide the student with a deeper knowledge of certain aspects of classical systems, partly in preparation for more advanced courses, by examining statistical approaches to physical problems, the laws of thermodynamics and thermal interactions, entropy, many particle systems, kinetic theory of gases and the Maxwell distribution. *Exclusion*: PHY254Y. *Prerequisite*: PHY118Y(with minimum of 70% & P.I.)/140Y. *Corequisite*: MAT239Y, MAT214H/APM251Y.

PHY256H

**Introductory Quantum Mechanics** 

26L

Historical development of quantum mechanics: energy quantum, particle nature of light, Bohr atomic theory, many electron atoms, wave nature of matter, wave mechanics, uncertainty relations and complementarity. Application of matrix and wave mechanics: basis states and discrete Schroedinger equation, electron in a magnetic field, ammonia maser, the laser, solid state physics in one-dimension. *Prerequisite*: PHY(118Y with a minimum of 70% & P.I.)/140Y, MAT132Y/138Y. *Corequisite*: MAT235Y/239Y.

PHY325Y Quantum Physics Laboratory

156P

An introduction to modern physics through a set of selected experiments. Topics include: laser physics, atomic spectroscopy, microwave optics, absorption of gamma rays, nuclear coincidence counting, gamma ray spectroscopy, Rutherford scattering, nuclear magnetic resonance, ferroelectric hysteresis. *Prerequisite*: PHY231Y. *Corequisite*: PHY256H (starting in 1979/80)

PHY326H Quantum Physics Laboratory

78P

This course is one-half of PHY325Y. Exclusion: PHY325Y. Prerequisite: PHY231Y. Corequisite: PHY256H (starting in 1979/80).

JGP334H

Physics of the Earth

26L, 13T

A course dealing with the quantitative physical description of the earth, its dynamics, internal structure and tectonic history. Topics covered in detail are: radioactivity and radiometric dating of rocks; the rotation and dynamics of the earth; the earth's gravitational and magnetic fields; ancient magnetic fields; and seismological evidence for the internal structure and composition of the earth. Extensive use is made of potential field methods and solution of partial differential equations. *Prerequisite:* PHY231Y. *Recommended preparation*: EPS100H/120Y/236H.

PHY340Y

**Quantum Mechanics** 

52L, 26T

An introduction to the theory of quantized systems. Topics include: waves and particles, Schroedinger wave equation, general formalism of quantum mechanics, harmonic oscillator, angular momentum, particle in a spherical potential, introduction to scattering theory, approximation methods, time dependent perturbation theory, electron spin, identical particles. Applications will be drawn from areas of atomic and nuclear physics. *Prerequisite*: PHY231Y, 256H, MAT235Y/(MAT239Y, MAT214H/APM251Y). *Corequisite*: APM311H/351Y.

PHY351H

**Advanced Classical Mechanics** 

26L, 13T

An advanced course in classical mechanics of particles and systems of particles. Topics include: the two-body central force problem, Kepler's Laws, and nuclear scattering; rotating frames of reference, Euler's equations, and gyroscopic motion; Langrangian and Hamiltonian mechanics, canonical transformations, and Hamilton-Jacobi theory. *Prerequisite*: PHY231Y, MAT235Y/239Y.

PHY352Y

**Electromagnetic Fields and Waves** 

52L, 26T

An advanced treatment of electromagnetism with emphasis on the structure and application of Maxwell's equations. Topics in electrostatics include multipole expansions and solutions to Laplace's equations. Propagation of electromagnetic radiation and evanescent waves in free space, dielectrics, conductors and plasmas, material boundaries, in waveguides and resonant cavities, and radiation by antennas and accelerated charges. *Prerequisite*: PHY231Y, 254H, MAT239Y, MAT214H/APM251Y. *Corequisite*: MAT334H, APM311H/351Y.

PHY354H

**Macroscopic Physics** 

26L, 13T

A treatment of physical concepts and mathematical techniques in the study of macroscopic systems. Topics include fluid mechanics; viscosity; surface tension; plasma physics; wave propagation in continuous media; stress-strain relationships and the Navier-Stokes equations; equations of state for a simple fluid. *Prerequisite*: PHY231Y, 254H, MAT239Y, MAT214H/APM251Y. *Corequisite*: MAT334H, APM311H/351Y.

PHY470Y

**Introduction to Research in Physics** 

An experimental or theoretical research problem under the supervision of a member of the Physics staff. By special arrangement, this research problem may be started during the summer before the student enters his final year. *Prerequisite*: Permission of Physics Faculty Advisor.

PHY471Y Supervised Readings

A programme of individual study chosen by the student with the advice of, and carried out under the direction of, a staff member. A student may take advantage of this course either to specialize further in a field of interest, or to explore interdisciplinary fields not available in the regular syllabus. *Prerequisite*: Permission of Physics Faculty Advisor.

### POLITICAL SCIENCE

Faculty Advisor: Professor R.B. Day

Political science is the study of politics and government. In general, politics are the ways in which the decisions are made about who is to rule in a society and what laws and policies are to prevail within its physical boundaries, while government is the process by which general rules are carried out. Part of political science is given over to describing specific processes or events - for example, a particular Canadian party leadership convention or such Canadian conventions generally - in somewhat the same way as a biologist would describe something in physical nature. But political science will go from these particularities to generalizations. One may describe political violence in contemporary Canada within the framework of an analysis of violence in countries similar to ours or, even more generally, in all societies both past and present. The study of politics at Erindale deals not only with how politics and government *do* proceed but how they *should* be carried on in the light of a long tradition of political philosophy. Thus students will be introduced in some courses to such questions as - what tests do we apply to determine whether one kind of government is better than another? who should rule? under what conditions, if any, have people a moral obligation to disobey government?

In spite of its fascination for many people, political science is a demanding study. This is so partly because its subject-matter is very complex. But more than that, we all bring to political science opinions about what is and what ought to be which we have accepted uncritically. Here are some questions to which most people would give ready answers:

- 1) are totalitarian nations more likely than democratic countries to have aggressive foreign policies?
- 2) is it desirable that governments should not try to "legislate morality"?
- 3) are we more likely to control environmental pollution if we vest powers over such matters in larger rather than smaller units of government?

Although most of us would be willing to make snap judgments about such questions as these, each is very complex and our opinions are probably no better founded than are those of non-experts about, say, the law of relativity or the causes of the common cold. The study of political science will not eliminate political prejudices and is not directed toward eliminating political convictions; at a minimum, it gives a person more ability than he has otherwise, to give an account of the basis of his beliefs, both about what the political world is, and what it can and should be.

Please see Section 7 for details of Programme Requirement.

POL100Y Introduction to Canadian Politics

52L, 26T

A study of the political process in Canada, including Canadian political culture, the formation of public opinion, political behaviour, political parties, the constitution, federalism, French Canada, federal-provincial financial relations, and the structure and functioning of political institutions, such as the cabinet, parliament, the judiciary, and the public service.

POL200Y Political Theory

52L

The development of political thought to the 17th century. Among the theorists examined are Plato, Aristotle, Machiavelli, Hobbes and Locke.

POL203Y Politics and Government of the United States

52L

A comparative study of the development of American government and the main elements of the American political tradition; the structure and functioning of executives, legislatures, courts, bureaucracies, parties, and pressure groups in federal and state government; characteristic processes of American politics such as voting, bargaining, and regulation; and resultant patterns of public policy.

52L

POL204Y Politics and Government of the U.S.S.R.

Historical development of the Soviet political and economic system; the leadership, party, public administration, political socialization, interest groups, dissent.

POL208Y Introduction to International Relations

52L

The contribution of the individual, the group, the nation, the state, and the international system to conflict and conflict management in the nineteenth and twentieth centuries, and an examination of the problems of equity and justice in the contemporary international system.

POL211Y Canadian Political Parties (Formerly POL311Y) (Offered in alternate years) 52L
The role and functioning of Canadian political parties, intra-party structures and processes, political culture and ideas, federal and provincial party systems, elections and voting. Prerequisite: POL100Y.

POL214Y

The State in Planned and Market Economies (Offered in alternate years)

Considers the main premises of Marxism, Liberalism and Democratic Socialism; the relationship between the Welfare State and the Rule of Law; economic planning and trade union activity in socialist and mixed economies; the role of interest groups in an administrative society; and the relation between political and economic structures.

Prerequisite: POL100Y/101Y/ECO100Y.

POL221H Political Participation 26L
How and why do people get involved in politics? An examination of the behaviour of the ordinary citizen in Canada and the United States. Topics to be considered include: the development of mass democracy; the form and extension of popular participation; elections and voting behaviour; political protest movements.

POL222H Elites and Political Leadership

An introduction to the study of political leadership and the exercise of political power.

Topics will include the relationship of political leaders to the non-political elites in society, the cohesiveness and responsiveness of political leadership, the turnover of elite personnel, and the characteristics and processes of decision-making. Prerequisite:

POL221H/one other POL course.

POL302Y Politics and Government of Western Europe
Common features of political life in Western Europe and the particularities of such countries as West Germany, Italy, Britain, and France. Historical development of patterns of political opposition; relationships between social cleavages, party systems, political leadership, public policy.

POL304Y

Public Policy-Making in Canada (Formerly POL209Y) (Offered in alternate years)

Public policies in Canada, the relationship between changing public policies and political development, and the institutional framework within which policies are formulated and implemented. National economic growth and development, regional disparities, social welfare, education, health, law and order. Exclusion: POL209Y. Prerequisite: POL100Y.

POL308Y Urban Politics 52L, 13T
A comparative course dealing with Urban Politics in Canada, Britain and the United States. It will deal with governmental structure, political issues, and the political process in urban areas. A major element will be a research paper on some aspect of politics in the metropolitan Toronto area.

POL312Y Canadian Foreign Policy
A theoretical and historical view of Canada's external relations; the Canadian foreign policy process, including policy approaches, government decision-making, domestic and external processes and instruments, techniques and bargaining; relations with the United States, Europe and the outer world; foreign policy in the diplomatic, military, economic and cultural sectors. *Prerequisite*: POL208Y.

POL314Y	Public Opinion and Voting 52L
	An examination of the nature of political attitudes and opinions, the processes by which
	they are acquired, their use in describing political culture, and the role of opinions and
	attitudes as explanations of individuals' voting choices. Research on Canadian politics will
	be discussed in comparison with studies in other countries.

- POL316Y Contemporary Canadian Federalism (Offered in alternate years) 52L Constitutional, political, administrative, and financial aspects of federal-provincial relations, regionalism and cultural dualism. *Prerequisite:* POL100Y.
- POL320Y Modern Political Thought 52L

  The development of political thought in the 18th and 19th centuries; implications for political thought in the 20th century. Democratic and anti-democratic tendencies. Prerequisite: POL200Y.
- POL322Y

  Introduction to Public Administration

  An introduction to the literature of public administration and to some of the main issues of the present and recent past in Canada (and to a limited extent in Britain and other countries). In other countries primary emphasis will be on policies or features that have influenced Canadian practice. Counts as COM course for purpose of B.Com. Prerequisite: COM100Y/203H/POL100Y.
- POL328Y International Organization

  A weekly two-hour lecture concerned with the development, structures, and functions of international organizations. The emphasis is on the political impact of international organizations and international law in international relations. Most attention will be focused on the two universal, political organizations, the United Nations and its forerunner, the League of Nations. Other international organizations will also be considered. Prerequisite: POL208Y.
- POL329Y Marxism 26L, 26S (First part of course lectures, second part seminars). A survey of Marxist political thought dealing with Marx and Engels; the German Social Democrats; Lenin, Trotsky and the Russian revolution; Maoism; problems of contemporary communism. *Prerequisite:* A course in political theory or philosophy.
- POL330Y Politics and Morality 52L
  The relation between the individual's quest for the good life and political order. The role of the wise man in civil society. Study of a small number of texts including Sophocles, Plato, Rousseau and Nietzsche. Prerequisite: POL200Y.
- POL331H Ontario Government and Politics (Offered in alternate years) 26L Political structures and processes in Ontario; Cabinet government; the interaction of Cabinet, Legislature and public service; political parties and the party system; provincial-municipal relations. *Prerequisite:* POL100Y.
- POL340Y International Law 52L International law as an instrument of conflict resolution. Recognition, sovereign immunity, subjects of international law, and jurisdiction are some of the subjects examined. 

  Prerequisite: POL208Y.
- POL446Y **20th Century Political Thought** 52S An interpretative study of central themes and issues. Representative thinkers: Nietzsche, Weber, the Frankfurt School, Camus, Arendt, Strauss.
- POL495Y Undergraduate Reading Course
  A reading course in which the written component will be agreed upon between the student and instructor. *Prerequisite:* Permission of Instructor and Discipline Representative.

## **PSYCHOLOGY**

Faculty Advisors: Professors R. Abramovitch and A. Fleming

Psychology is the science which examines the structure and organization of behaviour in animals and man. It is concerned with the means by which behaviour is acquired and explores the mechanisms of adaptation to the social and physical environment. Emphasis is directed toward cognitive, social, physiological, genetic, and other factors which determine or affect behaviour. Among the topics covered by psychology courses are developmental changes in behaviour, learning, the structure and organization of the senses, modes of perceiving and responding, the environment and genetic events which shape behaviour, the origins and implications of drives, motives, conflicts, and emotion, and the wide variety of individual and species differences which are produced by differences in genetic endowment, physiology, and past experience.

Because of the demands of science for rigor and objectivity, stress is given to the techniques by which behaviour is studied. Because psychology is the science of the behaviour of all organisms, the discussion of animal behaviour constitutes an important part of many psychology courses. An intensive examination of experimental findings is paramount in all psychology courses.

Students who are interested in psychology as a career must be prepared for several years of graduate study. Persons who hold a Ph.D. in psychology find employment in universities, research institutes, mental hospitals and clinics, government agencies, and large corporations. A few work as self-employed consultants or therapists. The B.Sc. with a concentration in psychology is not in itself a professional qualification. People holding bachelor's degrees in psychology typically find employment in a wide variety of business, technical, educational, or social-service areas. However, further formal or on-the-job training is usually required. Nevertheless, undergraduate courses in psychology may be valuable to students planning various professional careers (e.g. in medicine, law, nursing, education, etc.).

Please see Section 7 for details of Programme Requirement.

PSY100Y Introductory Psychology

78L

Psychology is the science of behaviour, and this course seeks to acquaint the student with the scientific method as it is applied in attempting to understand both human and animal behaviour. This course is a prerequisite for all other psychology courses, except PSY201H, 202H.

PSY201H

Research Design and Analysis in Psychology I

26L, 26T

Basic descriptive and inferential statistics. *Exclusion*: Any concurrent or previous Statistics course.

PSY202H

Research Design and Analysis in Psychology II

39L

Concerned with the design of experiments and the more advanced methods of statistical analysis, including complex analysis of variance. *Exclusion:* Any concurrent or previous statistics course except PSY201H. *Prerequisite:* PSY201H.

PSY203H

**Experimental Design and Theory** 

39L

Problems involved in experimental design and the interpretation of experimental findings; the logical structure of psychological theories. Practice in the critical evaluation of experimental designs and the correction of experimental errors. *Prerequisite*: PSY100Y.

PSY210Y

**Introduction to Development** 

781.

A survey of the scientific study of the behaviour of children. Topics include the historical and philosophical backgrounds, methods and theories, and research on particular aspects of behavioural development. *Prerequisite*: PSY100Y.

PSY220Y

Introduction to Social Psychology

78L.

A survey of contemporary areas of research in social psychology. Areas to be considered include social perception, attitudes, interpersonal relations, group processes, and ethnic attitudes. *Prerequisite*: PSY100Y.

PSY230H Introduction to Personality
A survey of theories of personality, focusing on its formation and components, and an evaluation of the empirical status of each theory according to the current research literature. Prerequisite: PSY100Y.

PSY252H Animal Behaviour
A study of the social behaviour of organisms as observed and measured in both laboratory and field settings. The evolution and mechanisms of the behaviour of a variety of animals will be examined. Emphasis will be placed on the similarities and differences between species in such behaviours as courtship, mating, parental care, feeding, aggression, and other social behaviours. *Prerequisite*: PSY100Y.

PSY260H Introduction to Learning 39L A survey of empirical findings and theoretical interpretations relevant to the scientific study of the phenomena of learning and memory in human and animal subjects. *Prerequisite*: PSY100Y.

PSY270Y Introduction to Cognitive Psychology 52L A systematic investigation of thought processes and mechanisms underlying them. Topics include concept learning, problem solving, language, attention, and information-processing. *Prerequisite*: PSY100Y.

PSY280Y Perception 78L Emphasizes seeing and hearing. The ways the processing systems work in humans and lower animals. Visual perceiving of shape, space, motion, and colour. Auditory perceiving of simple and complex sounds, location, speech. Focus is on the perceiver as seeker and user of information. Prerequisite: PSY100Y.

PSY290Y Introduction to Physiological Psychology
An introduction to the study of the neural and endocrinological bases of behaviour, including aspects of normal and abnormal neural and cognitive development. Prerequisite: PSY100Y.

PSY303H Individual Project

(\*) Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour. *Prerequisite*: PSY201H, 202H, a laboratory course and P.I.

PSY304H Individual Project

(\*) Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour. *Prerequisite*: PSY201H, 202H, a laboratory course and P.I.

PSY311H Social Development
A survey of contemporary research and theory in various aspects of social development such as moral development, sex-role development, aggression, pro-social behaviour.

Prerequisite: PSY210Y.

PSY314H Perceptual Development 39L
A survey of current research in auditory and visual abilities in infancy and childhood.

Exclusion: PSY312H. Prerequisite: PSY210Y/280Y.

PSY315H Cognitive Development

A survey of contemporary research and theory in the development of language, thinking and intelligence, including a consideration of Piaget's views. Exclusion: PSY312H. Prerequisite: PSY210Y/260H/270Y.

PSY316H Early Social Behaviour 39S
An examination of research on topics such as attachment, dependency, and peer relations in infants and young children. *Prerequisite*: PSY210Y.

PSY319H **Developmental Psychology Laboratory**  30P

Readings, laboratory exercises and research projects designed to acquaint the student with methodology appropriate for infant and child study. Prerequisite: PSY201H, 202H, 210Y.

PSY320H Social Psychology: Attitudes 391

Intensive study of social attitudes and opinions - development, description, measurement, modification, and organization. Prerequisite: PSY220Y.

PSY324H Aggression

Examination of the situational determinants of human aggressive behaviour. Some comparative literature will be related to a global view of the problem. Topics include: definition of aggression, aggression as arousal, alcohol and violence, personal space, anger and cognitive labelling, and deindividuation. Prerequisite: PSY100Y.

PSY329H

Social Psychology Laboratory

39P

Independent research projects in social psychology. Each project will include the design of an experiment, data collection, and a written report. Prerequisite: PSY201H, 202H, 220Y.

PSY330H

**Psychometrics** 

391

Test construction and standardization will be examined with emphasis on theory and execution of standard and special correlational techniques (including Pearson and Spearman methods; partial and multiple correlation; biserial, point-biserial, tetrachoric and phi coefficients). Theoretical and practical implications of the various forms of reliability and validity testing will also be explored in the context of standardization, prediction and normative scaling. Prerequisite: PSY201H, 202H, (or an equivalent full course in statistics), PSY230H.

PSY331H

**Psychological Tests** 

391.

Critical analysis of objective and projective tests of intelligence, personality, interests and aptitudes will be undertaken with considerable emphasis given to reliability and validity research associated with these instruments. Prerequisite: PSY330H.

PSY332H

**Advanced Personality** 

261.

Detailed discussion of the extension of major theories of personality to treatment (therapy) for personality disorders, and research growing out of the theories. Prerequisite: PSY230H.

PSY340Y

Abnormal Psychology

A survey of theories and research on abnormal behaviour and psychological treatment with special emphasis on social learning theory and behaviour modification techniques. Exclusion: PSY240H. Prerequisite: PSY100Y.

PSY341H

Psychopathologies of Childhood

26L

Considers concepts of normal, abnormal and delayed development. Schemes of classification and diagnosis, approaches to identification of etiologies, and contemporary treatment methods are critically evaluated. The emphasis is on controlled experimentation as a primary source of knowledge about psychopathology and treatment. Prerequisite: PSY210Y/340Y.

PSY342Y

Practicum in Exceptionality in Human Learning

26S, 52P

A seminar and practicum dealing with the philosophy and application of psychological principles in working with exceptional children, both handicapped and gifted. Seminar at Erindale, practicum through selective placement in elementary and secondary schools and other public agencies, under the supervision of the course instructor. Frequent reports; two essays, one in connection with the practicum work of each term. Prerequisite: 10 full course equivalents, including PSY210Y. (Not offered until 1983-84 at the earliest).

JBP359Y Sociobiology: Biological Bases of Social Behaviour (See Joint Courses) 56L, 78P Concepts from ethology, ecology, and populatioon biology will be introduced and applied to the understanding of the evolution and biological function of social behaviour. Topics to be discussed will include altruism, aggression, social spacing, dominance, sex, parental investmeent and care, social symbioses, and the evolution of life histories. Emphasis will be placed on the complex social systems of insects and mammals. Laboratory sessions will involve field observations, laboratory demonstrations, and the preparation of individual projects. Given by the Biology and Psychology departments. *Prerequisite:* BIO100Y and PSY100Y.

PSY373H Human Memory and Learning
Facts, theories, and methods in the study of human learning. Major emphasis will be on recent trends in the study of verbal learning, memory and verbal behaviour. Exclusion: PSY371H, 372H. Prerequisite: PSY260H/270Y(PSY270Y is strongly recommended).

PSY374H Introductory Psycholinguistics 26L A contemporary approach to the psychological study of language and speech, highlighting the biological and cognitive aspects of language acquisition and use. Exclusion: JLP324H. Prerequisite: PSY210Y/260H/270Y.

PSY376H Psychology of Reading(Offered in alternate years)

Survey of various topics concerning reading processes and their acquisition, including perceptual processes in reading, reading comprehension and recall, learning to read, individual differences in reading skills, rapid reading, reading disabilities and artificial intelligence models of reading. Emphasis will be on an understanding of the underlying information-processing mechanisms. *Prerequisite*: PSY270Y.

PSY379H Human Memory and Learning Laboratory

Experiments will be carried out to illustrate recent theoretical and experimental issues.

Students use themselves (and other students) as subjects and are encouraged to design, carry out and write up experiments in this area. *Prerequisite*: PSY201H, 202H, and 270Y/373H.

PSY389H Sensory and Perceptual Processes Laboratory 39P
The fundamentals of sensory and perceptual processes. Students conduct weekly laboratory experiments, using each other as subjects. *Prerequisite*: PSY201H, 202H, 280Y.

PSY390H Advanced Topics in Physiological Psychology
Current areas of research in physiological psychology will be explored in detail. These areas will include the following: the hormonal bases of human and animal behavi- our, the development of motivational systems and perceptual capacities, the physiological bases of memory, language, and other higher cortical functions in man, and the neurochemical bases of sleep and emotion. *Prerequisite*: PSY290Y.

PSY393H Cognitive Neurology
Problems in cognitive psychology will be explored from the viewpoint of clinical neurology. Some sample topics: amnesia and models of memory; split-brain research; the temporal lobes and verbal and non-verbal memory; the role of the frontal lobes; perceptual asymmetries in normal people; models of brain function. *Prerequisite*: PSY100Y.

PSY394H Motivation and Emotion 26S
This course will examine models of emotion from an historical and theoretical perspective.
Close attention will be paid to the role of cognitive-perceptual, autonomic and somatic variables particularly as they relate to the phenomenology of emotion and the motivation of behaviour. Prerequisite: PSY100Y.

PSY399H Psychobiology Laboratory 39P Supervised demonstration experiments designed to familiarize students with methods of collecting, analysing, and reporting data in ethological and physiological experiments employing animal subjects. Students will also learn how to handle selected species of animals. *Prerequisite*: PSY201H, 202H, 290Y.

PSY400Y Thesis

78S

Each student will conduct independent research and write a thesis under the supervision of staff member(s). Seminar meetings will be held weekly to discuss (a) general topics important to the conduct of research; (b) student research proposals; (c) thesis results. Admission decided on the basis of academic merit. *Prerequisite*: (PSY201H, PSY202H)/BIO360Y, a laboratory course in Psychology, satisfactory progress in the Specialist Programme in Psychology or Interdisciplinary Specialist Programme in Animal Behaviour.

PSY403H (\*) Individual Project

Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour. *Prerequisite*: PSY201H, 202H, a laboratory course and P.I.

PSY404H (\*) Individual Project

Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour. *Prerequisite*: PSY201H, 202H, a laboratory course and P.I.

PSY410H

Special Topics in Developmental Psychology (Topics change periodically) 39S Examination in depth of a limited topic within developmental psychology. Content in any given year will depend on the instructor. Course description is available from the Psychology Secretary. *Prerequisite:* PSY210Y, P.I.

PSY420H

Special Topics in Social Psychology (Topics change periodically)

Examination in depth of a limited topic within social psychology. Content in any given year will depend on instructor. Course description is available from the Psychology Secretary, Prerequisite: PSY220Y, P.I.

PSY440H

Special Topics in Abnormal Psychology (Topics change periodically)

Examination in depth of a limited topic within abnormal psychology. Content in any given year will depend on instructor. Course description is available from the Psychology Secretary. *Prerequisite:* PSY340Y, P.I.

PSY480H

Special Topics in Perception (Topics change periodically)

Examination in depth of selected topics within perception. Content in any given year will depend on instructor. Course description is available from the Psychology Secretary. Prerequisite: PSY280Y, P.I.

\*Relevant faculty members must be consulted during preceding term. Students may take no more than the equivalent of four "project" or "thesis" half courses.

### **RELIGIOUS STUDIES**

Faculty Advisors: Professors S.A. Nigosian and L.E. Schmidt

The academic study of religion involves the examination of many forms of religious life, including the great religious traditions (Buddhism, Christianity, Islam, Judaism, Hinduism, etc.) using a variety of methods (historical, philosophical, social scientific). Definitions and theories of religion are integral parts of the subject matter of Religious Studies. The diversity which characterizes the Department is reflected in the variety of courses offered or crosslisted, and by the differences in the background and training of our faculty.

The study of religion offers useful preparation for participation in a religiously diverse society, and for a wide range of careers (eg. social work, law, teaching, leadership in religious organizations). Opportunity is provided for students interested in the graduate study of religion at the M.A. and Ph.D. levels at the University's Centre for Religious Studies. As with other programmes leading to the Bachelor of Arts degree, however, the study of religion is intrinsically valuable and satisfying and can be pursued for its own sake.

Specialist, major, minor and joint programmes are described in detail in the Department of Religious Studies' Handbook. These programmes may include a limited number of relevant courses offered by other Colleges or by departments such as Anthropology, Classics, East Asian Studies, English, Fine Art, History, Middle East and Islamic Studies, Near Eastern Studies, Philosophy, Psychology and Sociology.

Enquiries: Faculty advisors (828-5275) or Department of Religious Studies, 110 Charles St. West. (978-2395)

Please see Section 7 for details of Programme Requirement.

REL100Y World Religions: An Introduction
An introduction to various religious traditions from prehistoric to modern times, including Judaism, Hinduism, Zoroastrianism, Buddhism, Taoism, Confucianism, Shinto, Christianity and Islam. Comparison of ideas, attitudes, practices and institutions. Exclusion: REL220Y.

REL105Y Contemporary Problems in Religious Ethics
An introduction to the analysis of ethical problems in the context of religious studies.
Abortion; poverty; sex, marriage and the changing roles of men and women; genetic engineering; the ecological crisis.

REL203Y

Religion and Literature

52L, 26T

The problems of doubt and faith, despair and hope, flesh and spirit, vice and virtue, sin and grace, suffering and freedom, mortality and immortality, in the works of selected imaginative writers. Critical analysis, in terms of classical theological categories, of selections from such authors as Dostoyevsky, Bernanos, Mauriac, Eliot and Camus. (All works to be read in English.)

REL207H Religion and Identity in Canada (Offered in alternate years)

26L, 13T

Personal and social identity as created and expressed through such Canadian religious groups as "mainline" religious traditions, evangelical sects, pentecostal-charismatic movements, ethnic churches, and the "new religions." Religious behaviour studied as the interplay between believing and belonging. Recommended preparation: REL105Y.

REL210H Hope and the Human Condition
Twentieth century Christian responses to the judgment that man's "origin, his growth, his hopes and fears, his loves and beliefs are but the outcome of the accidental collocation of atoms" (Bertrand Russell). The significance of hope for personal, social and political life according to such thinkers as Macquarrie, Moltmann, Ellul, and Metz.

REL212Y Major Themes in Biblical Literature 52L, 26T Major religious themes running through biblical literature. Old and New Testament concepts of creation, election, covenant, salvation, divine law, prophecy, wisdom, justification, etc.

REL224H Technology, Ethics and the Future of Humanity

The role of technology within various projections of global economic development. Assumptions about human life and nature implicit in such projections. Ethical and religious implications of issues such as the energy crisis, modernization of the third world, expansion of multinational corporations, the nuclear arms race and environmental pollution. Recommended preparation: REL105Y.

REL226Y

Religion and Culture: A Comparative Study

The meeting and mixing of Celtic, Roman Catholic, Protestant, and scientific religions in the formation of Western culture. Slides, music and readings comparing sacred arts, mystic voyages, shrines and space, religious thinkers, transforming inventions, cults of the dead, and sex as spiritual discipline.

REL230Y The Roles of Religion in Human Development

The positive and negative roles which religion has played and continues to play in human development and in cultural progress. A general analysis of personhood and the need in authentic human living for self-transcendence. The phenomenon of faith; religion as wonder; religion as meaning; and religion as health.

REL241Y Introduction to the New Testament (Offered in alternate years)

52L, 26T

An introduction to the types of literature in the New Testament (Gospels, Acts, Epistles, Apocalypse) and to the distinctive content of the literature as a whole. The history of texts and versions, the process of canonization of the literature, and the critical methods of scriptural study are examined.

**REL261Y** Christianity in the Context of World Religions

52L

The role of Christianity among religions; its contribution to human ethical and religious ideas. Studied in its historical development and through an analysis of its institutions, practices and teachings.

**REL361Y** World Religions: A Comparative Study

52S

A comparative study of World Religions, including their role and significance in modern secular society. Agreements and differences in teachings and practices among World Religions. Arguments for and against a universal religion. A review of various proposals for the future direction of World Religions. Recommended preparation: REL100Y/200Y.

REL362H Evolution and Modern Man - A Christian Interpretation

261.

The thought and spirit of Teilhard de Chardin as a Christian interpretation of evolutionary theory. Topics include: evolution and Christianity, cosmic convergence, personalizing universe, love as energy, building the earth, dynamics of hope. *Recommended preparation:* one previous REL course.

REL363H Evil and Sin - a Christian Interpretation

26L

The biblical and theological foundations for a Christian interpretation of evil and sin. Evil as problem and as mystery - lines of solution and approaches to the mystery. Old misunderstandings and new insights into a theology of sin. Sin as act and as condition (sinfulness). The role of evil and sin in the process of man's religious development. Recommended preparation: one previous REL course.

**REL375Y** Communications and Religious Consciousness

52L, 26T

The development of religious identity both from a psychological and a sociological point of view, and the pervasive effects of the communications media on this development. The function of mythic acts, clothes, cosmetics, dance, music, academic structures, novels, movies, newspapers, as well as more personal forms of communication (diary, autobiography, letters, etc.) in the creation of religious consciousness. *Recommended preparation:* one previous REL course.

REL490Y

**Individual Studies** 

Student-initiated project of reading and research, supervised by a member of the Department. Primarily intended for Specialists and Majors. After obtaining a supervisor, a student must apply to the Department.

REL491H

**Individual Studies** 

Student-initiated project of reading and research, supervised by a member of the Department. Primarily intended for Specialists and Majors. After obtaining a supervisor, a student must apply to the Department.

### SLAVIC LANGUAGES AND LITERATURES

Faculty Advisor: Professor K.A. Lantz

The Slavic literary and cultural tradition represents one of the great achievements of mankind. The Department offers a range of courses in Russian language and literature to provide access to that tradition. These courses are suitable for inclusion in a wide variety of programmes of study irrespective of whether the student has studied Russian in Grade 13 or not. Some students may specialize intensively in Russian language and literature. Others may simply wish to gain a working knowledge of Russian to aid their reading of important material in another field, as for example, science or social science. Language study in the Department emphasizes skills in using literary materials, and it also employs oral methods, combining small instructional groups with laboratory and conversational practice.

Russian literature has always been concerned with meaningful and universal human problems and has looked at them from a fresh and unique point of view. Giants of world literature such as Pushkin, Turgenev, Tolstoy, and Dostoevsky explore these problems in their nineteenth century novels, plays and poetry. The continuation and development of this same tradition under new Soviet conditions in the twentieth century by writers such as the Nobel Prize Winners Sholokhov, Pasternak, and Solzhenitsyn makes another fascinating area of study.

Please see Section 7 for details of Programme Requirement.

SLA100Y Elementary Russian
An introductory course in Modern Russian. Practice in aural comprehension, speaking, reading, and writing. Language laboratory practice.

SLA110Y Introduction to Slavic Culture and Literature (In English) 26L, 26T (Offered in alternate years)

The historical development of Slavic culture, languages, and literatures from the beginning to the present. Readings (in translation) selected from all periods of Russian, Ukrainian, Polish, and other Slavic literatures, including works by Dostoevsky, Solzhenitsyn, Shevchenko, Mickiewicz.

SLA210Y

Nineteenth Century Russian Literature (In English)

A study of the major novels of the nineteenth century with emphasis on the problem of the individual in society. Readings (in translation) of the works of Pushkin, Gogol, Turgenev, Dostoevsky, Tolstoy, and others.

SLA211Y Masterworks of Russian Literature (Offered in alternate years) 26L, 26T Major fictional and dramatic works by nineteenth- and twentieth-century Russian authors, including Pushkin, Gogol, Turgenev, Tolstoy, Dostoevsky, Gorky, Mayakovsky, Pasternak, Solzhenitsyn, Nabokov. The stylistic range and psychological, political and philosophical concerns of the writers. Readings in English. Exclusion: SLA210Y, 310Y.

SLA212Y

Soviet Man and Society in the 80's

Culture and society over the past decade as portrayed in fiction and in journalism; literature, theatre, education, religion, sports, cultural dissent and other topics. Readings in English.

SLA220Y Intermediate Russian 78T
Continued study of Russian with language laboratory practice, oral practice, composition and conversation based on reading of literary texts and topics of current interest.

Prerequisite: SLA100Y or Grade 13 Russian.

SLA310Y

Twentieth Century Russian Literature (In English)

A survey of Russian literature of this century with emphasis on the Soviet period. A study of modernism; the impact of the 1917 Revolution on literature; the evolution of Soviet literary policy; contemporary problems of artistic freedom. Readings (in translation) will include works by Gorky, Bunin, Babel, Sholokhov, Pasternak, Solzhenitsyn, and others.

SLA314H Dostoevsky

26S

Crime and Punishment, The Brothers Karamazov, plus other novels and shorter works. Dostoevsky's political, psychological and religious ideas as they shape and are shaped by his literary art. Readings in English.

SLA317H

Tolstoy

26S

War and Peace, Anna Karenina, plus other important shorter works. Tolstoy's political, psychological and religious ideas as they shape and are shaped by his literary art. Readings in English.

SLA318H

Short Russian Fiction of the 19th Century

26S

Stories by Pushkin, Gogol, Dostoevsky, Tolstoy, Chekhov, and others. The short story as a genre. Readings in English.

SLA319H

Short Russian Fiction of the 20th Century

26S

Stories by Gorky, Babel, Pasternak, Solzhenitsyn, and others. The short story as a genre.

Readings in English.

SLA320Y

Advanced Russian

78T

Continued study of grammar, composition, and translation. Oral practice and stylistic analysis of selected texts. Extensive reading programme. *Prerequisite*: SLA220Y.

SLA363H

Solzhenitsvn

13L, 13T

Solzhenitsyn's critique of contemporary Soviet reality and his interest in moral problems of a more universal nature. His literary craftsmanship. The treatment of Solzhenitsyn's works by Soviet ideologists and Western literary critics. Readings in English.

SLA367H

Chekhov

13L, 13T

Selected stories and plays: stylistic, structural, and thematic analysis; literary and historical context; influence in Russia and the West. Readings in English.

# SOCIOLOGY

Faculty Advisor: Professor W. Kalbach

One of the essential questions sociologists have had to confront concerns the extent to which the individual is determined by society and to what extent he is a determinant of society. In examining such questions, sociologists use the methods of science as well as those of the humanistic disciplines. The answers are not self-evident and traditional explanations often prove unreliable, both as a source of understanding and as a guide to action. Sociology provides another approach for assessing existing knowledge and developing more valid theories of social behaviour and the nature of society.

Students in other fields may gain from the study of sociology a clearer understanding of the human and social condition as it relates to their chosen profession and to contemporary institutions in general. There are opportunities in Canada and abroad for professional sociologists in teaching, research, administrative and consulting positions. A professional career in sociology usually requires advanced training beyond the undergraduate level.

There are a variety of areas of interest which the student may select for emphasis in the specialist and major programmes. The subspecialty areas in sociology are listed below and the Department is prepared to recommend in consultation with the student, programmes which emphasize Canadian society, urban sociology, interpersonal relations, research methods or some other combination of courses. Students entering the sociology programme should enrol with the Department of Sociology before the end of the first term in their second and subsequent years and should seek advice from the advisor or other instructors in the Department while working out their programmes. Registration in the final year of studies is necessary to confirm that all requirements are being met and to insure that the specialist, major, or minor status will be noted on one's graduating transcript. Since there have been a number of changes in the sociology specialist and minor programmes (now referred to as major programmes) over the past few years, students should check their own second year (or equivalent) Calendar to find the requirements applicable to them. If in doubt, check with your advisor when enrolling in the Department.

The Department of Sociology offers a Specialist, Major and a Minor Programme in Sociology.

Please see Section 7 for details of Programme Requirement.

SOC101Y Introduction to Sociology 52L, 26T
An introduction to the basic concepts, principles, and methods of sociology as a discipline for the study of society.

Introduction to Communication Theory and Research

This course aims at presenting the major theories of verbal and nonverbal communication.

The principal purpose is to familiarize the student with the various possibilities of analyzing communication from the point of view of psychology, sociology, philosophy, linguistics, drama, physics and religious studies. The course further aims to acquaint the student with the research methods most communication designing experiments in communication. *Prerequisite*: SOC101Y either previously or concurrently.

SOC200Y Introduction to Social Research (Offered in alternate years) 52L, 26T
How social observations are used to develop and test sociological ideas. A variety of theoretical approaches and research techniques are critically examined to illustrate general principles of conceptualization, measurement, and explanation. *Prerequisite:* SOC101Y.

SOC201Y Social Statistics (Offered in alternate years)

An introduction to data analysis which emphasizes understanding rather than mathematics, exploratory techniques (how to look for hypotheses); corresponding confirmatory techniques (how to test hypotheses). Basic analysis of variance, regression, chi-square; tables and graphs. Exclusion: Statistics courses. Prerequisite: SOC101Y.

SOC202Y Structure of Interpersonal Relations 52L, 26T A study of patterned relationships, social roles, and social expectations that arise out of interaction among individuals. *Prerequisite*: SOC101Y.

SOC203Y History of Social Theory
Origins and development of the classical tradition of sociological theory; the social and political ideas of this tradition; historical contexts, ideological elements and contemporary relevance. *Prerequisite*: SOC101Y.

SOC205Y Urban Sociology 52L, 26T Examines the city both as a significant development in world civilization and a working mechanism guided by contemporary policies. Studies human behaviour in its multifaceted relations with the urban environment. *Prerequisite*: SOC101Y.

SOC206Y Social Organization
Theories of exchange between individuals or groups, value consensus, networks, and modes of production as the organizational bases of society. Theories are compared and evaluated according to their internal consistency, utility in informing empirical research, and their compatibility or incompatibility with other approaches. *Prerequisite*: SOC101Y.

SOC207Y Sociology of Work and Occupations

The nature and meaning of work in relation to changes in the position of the professions, unions and government, of women and minority groups, and in industrial societies more generally. Career choice and strategies, occupational mobility, and individual satisfaction at work. *Prerequisite*: SOC101Y.

SOC212Y Deviance and Control 52L, 26T A sociological analysis of deviant behaviour which examines theories of its genesis, social definition, maintenance, control, and social consequences. *Prerequisite*: SOC101Y.

SOC214Y Sociology of the Family 52L, 26T Development of the contemporary western family with special emphasis on changing relations among its members. *Prerequisite*: SOC101Y.

SOC215Y Socialization

52L, 26T

The acquisition and reproduction of personality, culture, and social structure. Topics will include socialization and the socio-biology debate, psycho-social, cognitive, and behaviouristic approaches to human development, child-rearing practices, sex-role acquisition and learning, structural influences on values, attitudes and aspirations, political socialization, adult socialization and aging, and the comparative study of socialization. *Prerequisite*: SOC101Y.

SOC220Y

**Canadian Society** 

52L, 26T

An analysis of the changing structure of Canadian society. *Prerequisite*: SOC101Y.

SOC245Y

The Sociology of Aging

52L

Social gerontology is a growing discipline dealing with many social aspects of advanced age, e.g., problems of retirement, post-retirement life, living arrangements and family, changes in identity, new roles for later life. *Prerequisite*: SOC101Y.

SOC280Y

Communication and the Extraordinary

26L,26T

The study of persons labeled "exceptional" in mundane settings (family, school, leisure, etc.) and of those labeled "ordinary" in extreme settings, (concentration camp, natural disaster, exile, etc.) Emphasis will be placed on the child and adolescent and how he shuttles in and out of the roles of perpetrator, victim, spectator and survivor as information becomes available from his verbal and non-verbal communicational acts. *Prerequisite*: SOC101Y, 152Y.

SOC284Y

**Communication and Ethics** 

52L

This course examines the different ways that the flow and the content of information is controlled by various agencies, as well as the effects of censorship - or lack of it - on society. *Prerequisite*: SOC152Y.

SOC301Y

**Social Inequality** 

52L, 26T

Examines the various systems by which, in all human societies, rewards (such as prestige, power, wealth, and others) are differentially distributed, and the principal theories that have attempted to account for these phenomena. *Prerequisite*: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC303H

Careers in Crime and Delinquency

26L, 13T

An examination of delinquent and criminal life-styles from the perspectives of social psychology, the sociology of occupations, and the sociology of law. The etiology, social history, organization, and societal response to different types of crime and delinquency are considered. Special attention is given to the career criminal. *Prerequisite*: SOC101Y, 212Y.

SOC304Y

Change and Conflict in Contemporary Society

52L, 26T

An examination of technical, social, and ideological changes accompanying industrialization in both developed and underdeveloped nations. *Prerequisite*: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC305Y

Sociology of Religion (Offered in alternate years)

52L, 26T

Various theories of religious behaviour and organization are examined with special attention given to the role of religion in relation to social change and social integration. Current research and methods of study will be stressed. *Prerequisite*: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC306Y

Sociology of Crime and Delinquency

52L

Definitions and sociological explanations of crime and delinquency. Social background of Canadian criminal law; the role of police, courts, prisons and other institutions of social control. *Exclusion*: WDW203Y. *Prerequisite*: SOC212Y.

SOC308H The Canadian Media (Offered in alternate years)

Description and analysis of what is unique and distinctive about the electronic, printed and graphic media in Canada. Main topics of discussion: foreign influence in policy and decision-making (e.g. American ownership of major publishing firms), national networks in competition with private enterprise, the demand for more "Canadian content", the need for bilingual media, alternative presses, the handling of political crises and scandals in news reporting, etc. *Prerequisite*: SOC152Y and 1 SOC course at 200 level either previously or concurrently.

SOC309Y Sociology of Mass Communication

52L, 26P
The course first critically appraises some modern communications theorists --Innis,
McLuhan, Meier--and then dissects some old and new Canadian media institutions.

Special emphasis on the origin and destiny of innovation, governmental media organizations and their articulation with media institutions. Participants create a project utilizing one medium. Enrolment limited. Prerequisite: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC311Y Sociology of Education
An analysis of the relationship between education and society in comparative perspective; the consequences of the internal structure of educational systems; and current controversies surrounding the function and structure of educational institutions. Prerequisite: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC312Y Population and Society
An analysis of population change and consequences from both global and Canadian perspectives. Trends in mortality, fertility, and migration are examined relative to their significance for growth, and their relation to social structure and social change. Prerequisite: SOC101Y, 200Y/201Y.

SOC313Y Sociological Theory
The development of sociology and contributions of particular sociologists whose concepts not only have historical interest but also illumine the subject matter and method of contemporary society. *Prerequisite*: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC315Y Interaction in Institutional Settings (Offered in alternate years) 52L Ethnographic description and comparative analysis of standard social occasions taking place within the domains of the corporation, the church, school, government, and the court. The primary course objective is the observation and documentation of the everyday enactment of institutional "rules of the game" for social interaction. *Prerequisite*: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC316Y Group Structure and Process (Offered in alternate years) 52L, 26P
The study of small group processes and structures, including leadership, influence, cliques and coalitions, communication patterns, productivity and morale. Prerequisite: SOC101Y, 202Y.

SOC321H Social Research Methods II: Techniques and Applications (Offered in alternate years)
Theoretical and applied problems in research design, sampling and measurement with emphasis on survey research. Prerequisite: SOC101Y, 200Y.

SOC322H Social Statistics II: Techniques and Applications (Offered in alternate years)
The understanding and application of multivariate analysis using computers in the survey research environment. Prerequisite: SOC101Y, 201Y.

SOC324Y Politics and Society 52L, 26T
The social basis of politics. Culture and social organization in their relation to power and its application. *Prerequisite*: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC325Y Sociology of Health and Medicine

52L The organizational structure of health facilities and delivery of health care. Definition of health and illness by users and pathways to health-care procedures. Prerequisite: SOC101Y. Corequisite: 200-series SOC course.

SOC327Y Sociology of Death and Dving 52L

An analysis of death and the process of dying as social and cultural phenomena with emphasis on the complex of beliefs, ideas and actions relative to death. Prerequisite: SOC101Y, and one of the following: SOC215Y, 245Y, 312Y, or 325Y.

SOC328H **Environmental Sociology**  **78S** 

An examination of the multi-faceted relationship between the physical environment, especially the built environment (e.g. buildings) and human behaviour. Principles underlying people's use of space and the potential significance of the environment as a variable in the study of human behaviour will be considered. Prerequisite: SOC101Y, 205Y.

SOC329H Collective Behaviour

An analysis of non-conventional social action as seen in crowd and mass behaviour (panics, riots, demonstrations, crazes, etc.) involving a study of relationships between forms of collective action and the more conventional order, i.e., the relationship of collective behaviour to social action and control, stability and change. Prerequisite: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC330H Race and Ethnic Relations 26L, 13T

Social processes involved in minority relations in terms of race and ethnicity and their social, economic, and political consequences. Prerequisite: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC332Y **Small-group Communication**  26L, 26T

Verbal and nonverbal interaction in therapeutic, educational, administrative and business settings. Special attention will be paid to leadership, effective and ineffective communication, persuasive manipulations, conflict situations, decision making, permission, protection and power. Some of the material will be presented in simulated social situations. Prerequisite: SOC152Y and 1 SOC course at 200 level either previously or concurrently.

SOC334Y

Communication and Children

26L, 26T

Description and analysis of children's verbal and nonverbal communication networks, patterns and skills in the playgroup, in the classroom and with siblings, and with teachers. parents and some other adults. Prerequisite: SOC152Y and 1 SOC course at 200 level either previously or concurrently.

JGS340Y

Concepts, Methods and Values in Urban Studies (See Joint Courses)

52L, 26T

Designed for students concentrating in urban studies irrespective of major disciplinary area. A survey of a variety of types of urban study from the social science perspective. Linkages between the ways in which urban phenomena and processes are conceptualized, the methods employed to study them and the often implicit system of values in which such investigations are framed. Urban researchers, both academic and applied, will be invited to discuss their research in the context of these issues. Given by the Departments of Sociology and Geography. Prerequisite: SOC101Y, 205Y/GGR245Y and SOC200Y/201Y/(GGR202H, 207H, 280H).

SOC346Y

Society, Organization, and the Individual (Formerly SOC314)

52L, 26T

An analysis of formal organizations, e.g. hospitals, prisons, schools, business firms, government agencies, etc., focusing upon their structural characteristics, effects of social environments, and the influence upon their members. Prerequisite: SOC101Y and 1 SOC course at 200 level either previously or concurrently.

SOC390Y/391H/392H Independent Research

Intended for Sociology Specialists and Majors who have completed ten university courses, i.e., be in third year, and who wish to explore in depth a particular subject area in sociology. Students must have completed or be taking concurrently the required method and theory courses (SOC 200Y/201Y and SOC313Y, or their equivalent), and have attained a B average in SOC courses. There is a limit of two full course credits, or equivalent, of independent studies and not more than one full course or equivalent can be taken with the same instructor. To enrol, a student must submit a specific proposal and obtain the approval of both the instructor and the faculty advisor.

NOTE: Fourth-year courses provide the opportunity for greater specialization than is generally possible in second and third years. The actual content for "selected topics" courses, and additional prerequisites (if any) will be set by the instructor offering the course. Students who wish more information concerning specific courses and topics to be covered are advised to see the Faculty Advisor for Sociology.

SOC410H Selected Topics in Sociological Theory and Research Methods I 26S, 13P Prerequisite: SOC200Y/201Y for research methods topics and SOC313Y for sociological theory topics, and at least two additional sociology courses beyond the introductory level.

SOC411H Selected Topics in Sociological Theory and Research Methods II 26S, 13P Prerequisite: Same as for SOC410H.

SOC420H Selected Topics in Interpersonal Relations I

Prerequisite: SOC202Y, and at least two additional sociology courses beyond the introductory level.

SOC421H Selected Topics in Interpersonal Relations II
Prerequisite: Same as for SOC420H.

26S, 13P

SOC422H Selected Topics in Urban Sociology and Population I 26S, 13P Prerequisite: SOC312Y for population topics, and SOC205Y for topics in urban sociology, and at least two additional courses in sociology beyond the introductory level.

SOC423H Selected Topics in Urban Sociology and Population II

Prerequisite: Same as for SOC422H.

26S, 13P

SOC490Y/491H/492H Independent Research

Open only to students who have completed fifteen university courses, i.e., be in fourth year, and have a B average in SOC courses. For other requirements and restrictions, see SOC390Y/391H/392H.

#### **SPANISH**

Faculty Advisor: Professor O. Hegyi

Hispanic culture offers a variety probably unrivalled by any other modern western culture. In the Middle Ages Spain was the vital point of contact between the Christian, Jewish and Islamic civilizations; in its Golden Age it led the way in the exploration and settlement of the New World, and established a great empire in the process; today it is estimated that the Spanish language is the third most widely-spoken in the world.

Spanish studies has a twofold goal; the first, to learn to speak, understand, read and write with ease a language shared by over two hundred million people; the second, to become familiar with the civilization and intellectual life of the Hispanic world through study of the artistic and literary phenomena of that world.

Courses are offered for beginners in the language, as well as those with Grade 13 standing or equivalent. Stress is laid on both the spoken and written language and the language laboratory is used to promote fluency. After the first year all courses, both literary and linguistic, are conducted in Spanish as much as possible to give the student maximum exposure to the language.

Two courses, Spanish Civilization and Culture, and Latin American Civilization and Culture, are offered in English and may be taken by students in any year. These courses provide comprehensive views of the social, political, artistic and intellectual developments of Spain and Latin America and have proven useful not only to students studying the language but also to those who may have an interest in the Hispanic scene for other reasons.

Core language courses are offered in all years. Students wishing to specialize would, in addition to these core courses, follow programmes in literature and linguistics designed to allow them to enter Graduate Studies in Spanish or Type A courses at the Faculty of Education. Students may elect a single specialization (nine courses) or a combined specialization programme of Spanish and any other discipline (seven). In addition, Erindale offers a minor programme in Spanish consisting of five courses.

Opportunities for qualified teachers exist at the secondary and university levels. In addition, the study of Spanish as of other modern languages, may prepare students for such careers as those in the foreign service, journalism, publishing, commercial and cultural relations between Canada and Spanish-speaking countries. The development of closer Canadian relations with Spain and Latin America will extend the range of opportunity for those well versed in the Hispanic field.

In addition to Erindale course offerings, other courses may be taken on the St. George campus with the permission of the Faculty Advisor. Students may also wish to participate in the Study Elsewhere programme.

Early consultation with the staff is essential if the student is to be assured of a programme suitable for his needs and interests.

Courses with low enrolment may have to be withdrawn.

Please see Section 7 for details of Programme Requirement.

SPA 100Y Spanish Language for Beginners

78L, 52P

For those who have had no previous background in Spanish. By the end of the year, students should have sufficient skill in the written and spoken language to be able to specialize in Spanish if they wish. Emphasis will be placed on oral practice both in class and in the language laboratory. *Exclusion:* Grade 13 Spanish.

SPA220Y Composition and Oral Practice II

52L, 26T

Conducted mainly in Spanish and designed for those who have completed a basic course in the language. A grammar review and intensive written and oral practice provide an opportunity for a greater range of expression and a broader understanding of the language. *Prerequisite*: SPA100Y/Grade 13 Spanish.

SPA250Y Spanish Civilization and Culture (In English) (Offered in alternate years)

52L

Presents an overall view of the activities of the Spanish people from the early settlers of the peninsula to the current scene. Using the history of the country as a basic frame, it deals with the major currents of thought and the major accomplishments in literature, art, architecture and music. Slides, music and other illustrative material will be used.

SPA258Y Forms of Modern Hispanic Literature

52L, 26T

An introduction to ways of analysing literature through a study of Modern Hispanic literary texts (drama, prose and poetry). *Exclusion:* SPA247F, 257S. *Prerequisite:* SPA100Y/Grade 13 Spanish.

SPA280Y Latin American Civilization and Culture (In English) (Offered in alternate years) 52L From the pre-Columbian civilization (Aztec, Maya and Inca) to the present; deals with significant manifestations in literature, art, music, architecture. Discussion of social, economic and political problems of Latin America. Illustrative material.

SPA320Y Composition and Oral Practice III

Conducted mainly in Spanish and designed to meet the needs of those who already have a good basic knowledge of the language. Emphasis on improvement of style, translation, essay writing and oral practice. *Prerequisite*: SPA220Y.

SPA348Y Modern Hispanic Drama (Offered in alternate years) 52L

The major Spanish and Spanish American playwrights of the 20th century. Plays will be discussed and analyzed and, to reveal their full meaning in tangible theatrical terms, students will be encouraged to participate in the actual performance of some plays in a real theatre atmosphere. Exclusion: SPA346H, 376H. Prerequisite: SPA220Y.

SPA350Y Spanish Literature of the Golden Age (Offered in alternate years) 52L, 26T A study, in Spanish, of Spain's most interesting and richest period, comprising the sixteenth and seventeenth centuries. Original texts - poetry, drama and novel - will be studied as reflecting the society of the age and its changing values. Special attention will be given to the picaresque novel and Cervantes. *Prerequisite*: SPA220Y and one other course of the 200-or 300-series.

SPA356H Modern Spanish Novel (Offered in alternate years)

Covers the period from the beginning of the realistic novel in the nineteenth century up to the present day. Students will be expected to do a certain amount of reading of original texts as a preparation for their classes and a good working knowledge of Spanish is assumed as the course will be given in Spanish. *Prerequisite*: One or more SPA200-series courses.

SPA366H Modern Spanish American Poetry (Offered in alternate years) 52L
A study of some major poets and the different currents in Spanish American poetry; Pablo
Neruda, César Vallejo for special study. Prerequisite: One or more SPA 200-series courses.

SPA382H Modern Spanish American Novel (Offered in alternate years) 52L A study of the representative novels of Spanish America, including the regional and Indianist novel as well as that of the Mexican revolution. *Prerequisite*: One or more SPA 200-series courses.

SPA385H Spanish American Stories (Offered in alternate years) 52L Representative works of outstanding Spanish American short story writers including Quiroga, Cortázar, Rulfo and Borges. Prerequisite: One or more SPA 200-series courses.

SPA420Y Advanced Composition and Oral Practice IV

Designed for those who already have a good knowledge of the language. Emphasis on ability to write and speak good Spanish through translation, essays, letters, class discussions, etc. Prerequisite: SPA320Y.

SPA425H History of the Spanish Language (Offered in alternate years)

Begins with an introduction to phonetics, phonology and basic concepts of linguistics. Proceeds to the study of the evolution of Spanish from its vulgar Latin origins up to the present day. An attempt will be made to relate linguistic development to historical and cultural aspects. Some general knowledge of Latin is desirable. Interest in theoretical linguistics and a working knowledge of Spanish will be assumed. Given in Spanish. Prerequisite: SPA220Y.

SPA436H Contemporary Spanish Poetry (Offered in alternate years) 52L A study of some major poets and poetics of the twentieth century. The lectures will be in Spanish. *Prerequiste:* SPA220Y. *Corequisite:* SPA320Y.

### **STATISTICS**

Faculty Advisor: Professor H. Niederhausen

Statistical theory and methodology have applications in almost all areas of science, engineering, business, government and industry. The practising statistician is involved in such diverse projects as designing clinical trials to test a new drug, economic model-building to evaluate the costs of a guaranteed-income scheme, predicting the outcome of a national election, planning a survey of television viewing habits, and estimating the animal population in a popular hunting district. Today's consumer is bombarded with the results of so many quantitative studies using statistical methodology that it is necessary for him to know something about statistics in order to be properly critical. A basic knowledge of statistics should be an integral part of everyone's general education.

STA202H-212H is designed for the student who wishes an introduction to statistical thinking without bringing in such tools as probability theory and mathematical analysis. It is a terminal course, emphasizing the handling of data and graphical procedures in making inferences about populations.

STA242Y is designed for the more mathematically prepared student and is a necessary prerequisite for all third and fourth year courses in Statistics at Erindale.

STUDENTS WHO ARE INTERESTED IN A PROGRAMME ARE STRONGLY URGED TO HAVE EARLY CONSULTATION WITH THE FACULTY ADVISOR OR ANY STAFF MEMBER.

Please see Section 7 for details of Programme Requirement.

STA202H Statistics

26L, 13T

- (I) Acquaints beginning students in the biological, physical and social sciences with the fundamentals of statistics. The course discusses statistical procedures for describing large quantities of data and for making inferences about populations on the basis of samples. *Exclusion*: Any concurrent or previous Statistics course, STA222Y(G), ECO220Y.
- STA212H Application of Statistics

26L, 13T

- (I) A continuation of STA202H including an introduction to non-parametric, analysis of variance and linear regression techniques. Students interested in taking this course should consider carefully the courses listed below as exclusions and choose the appropriate sequence after discussion with faculty members. STA202H and 212H are together equivalent to STA222Y(G). Exclusion: STA222Y(G), 242Y, 252Y(G), PSY202H, ECO220Y, GGR212H, BIO361H. Prerequisite: STA202H.
- STA242Y Probability and Statistics: An Introduction

52L, 26T

Elements of probability theory, common distributions, point and interval estimation, standard significance tests, introduction to least squares and analysis of variance. *Exclusion*: STA212H, 222Y(G), 252Y(G), PSY202H, ECO220Y, GGR212H, BIO361H. *Prerequisite*: MAT132Y/138Y.

STA302H

**Regression Analysis** 

26L, 13T

Least squares theory and fitting equations to data, analysis of residuals, transformations. Practical implementations stressed. *Prerequisite*: STA242Y.

STA312H Methods of Statistical Inference

26L, 13T

A survey course: the mathematical methods of statistical inference. Exclusion: STA352Y(G). Prerequisite: STA242Y.

STA347H Probability and Applications

26L, 13T

Probability spaces and random variables, conditional probability, characteristic functions, limit laws. Application of common probability distributions. Introduction to stochastic processes. *Exclusion*: STA357Y(G). *Prerequisite*: STA242Y.

STA402H Experimental Design

26L, 13T

Statistical issues in the design of experiments and the collection of data. Analysis of variance, randomization, factorial designs, blocking, confounding, higher-way tables. *Prerequisite*: STA302H.

STA412H Estimation and Testing(Offered in alternate years)

26L, 13T

Basic theory of estimation and hypothesis testing. Prerequisite: STA312H.

STA432H Advanced Statistics (Offered in alternate years)

26L, 13T

Topics selected from: non-parametric techniques, multivariate analysis, decision-theoretic methods, Bayesian analysis, exploratory data-analysis, sequential procedures, reliability and life-testing. *Prerequisite*: STA242Y.

#### **SURVEY SCIENCE**

Faculty Advisor: Professor R. C. Gunn

Survey Science is concerned with the measurement and representation of the geometric and physical features of our environment. It finds application in a variety of activities, which include mapping the earth's surface and charting its waters, establishing land boundaries and delineating property, searching for and inventorying natural resources, determining the size and shape of the earth, and locating transportation facilities and other engineered structures.

Survey Science has close contact with many other disciplines, particularly those which deal with the land, its use, subdivision, development and management. Although very much a quantitative science, built upon a strong base of mathematics, physics and statistics, it also includes a substantial treatment of the law as it relates to the land and professional conduct.

Students who intend to proceed to registration with the Association of Ontario Land Surveyors will satisfy the academic requirements of the Board of Examiners by completing the four-year *Specialist Programme* set forth in Section 7 of this Calendar, together with those other courses specified by the Board and which are given as elective courses within this Programme. For these requirements of the Board as set down from time to time, students should contact the Faculty Advisor.

For registration as a Canada Lands Surveyor or with other provincial assocations, students should enquire directly to the secretary of the Board of Examiners of that jurisdiction.

All SUR courses, except SUR250H, 350H, 351H, 450H, 455H and 458H count as science credits.

Please see Section 7 for details of Programme Requirement.

SUR201H Introduction to Surveying (Formerly part of SUR200Y) 26L, 39P

(I) Introduction to the procedures used to acquire field data with applications in various surveying activities. *Prerequisite*: Grade 13 MAT (Algebra, R&F and C) and Physics.

SUR202H Basic Surveying (Formerly part of SUR200Y)
Processing of survey data for presentation in various forms. Traverse calculations, coordinate geometry and circular curve geometry. *Prerequisite:* SUR201H.

SUR210H Introduction to Survey Analysis
Application of matrix methods and the computer to the analysis of survey problems. Co-

ordinate transformations. Linearization of computational models. Error analysis and error propagation. *Prerequisite*: MAT132Y/138Y. *Corequisite*: SUR201H.

SUR230Y Land Surveying 52L, 78P
Principles and procedures for precise surveying measurements to determine direction,
distance, elevation and position; construction surveys dealing with alignment and the
volume of materials; the determination of astronomical azimuth, latitude and longitude.

Prerequisite: MAT132Y/138Y, PHY118Y/140Y, SUR202H.

SUR241H Introduction to Land Planning (Formerly SUR260H) 26L, 13T Fundamentals of obtaining and processing site information to provide the framework for land planning and site development design. Concept of official plans and zoning by laws. Prerequisite: EPS120Y/GGR100Y.

SUR250H Introduction to Survey Law
Legal history; legal systems and institutions; introduction to English law in general, with emphasis on land law; legal proceedings; the law of professional practice. *Prerequisite*: INE203H/205H/ENG100Y.

SUR311H Survey Analysis I (Formerly SUR240H)

The statistical theory of measurement; precision and accuracy; variance-covariance propagation; error ellipses and ellipsoids and their statistical properties. The adjustment of observations; parametric, conditional and combined least squares procedures, with applications to surveying problems. *Prerequisite*: SUR210H, 230Y, STA242Y.

SUR312H Survey Analysis II 26L, 39P
Survey control. Mathematical models for the parametric adjustment of horizontal control; formation and solution of the normal equations; statistical testing for horizontal control.
Pre-analysis procedures and survey network design. Adjustment of vertical control.

Exclusion: SUR410H. Prerequisite: SUR240H/311H. Recommended preparation:
CSC139H/149H.

SUR321H Geodesy I (Formerly part of SUR303Y)

Kinematics, gravity field, size and shape, and deformations of the earth. Three-dimensional positioning of points. *Prerequisite:* SUR210H, 230Y, CSC139H/149H. *Recommended preparation:* MAT228H, 235Y/214H and 233H, EPS120Y. *Recommended elective:* SUR305H/325H.

SUR322H Geodesy II (Formerly part of SUR303Y) 26L, 26P Horizontal positioning (including map projections). Heights. Gravimetry. Three dimensional, horizontal and levelling networks. *Prerequisite*: SUR321H.

SUR325H Geodetic Astronomy I (Formerly SUR305H)

The celestial sphere and its coordinate systems, variations in celestial coordinates, time systems, star catalogues and instrumentation. Determination of astronomic azimuth, latitude and longitude. *Prerequisite*: SUR210H, 230Y.

SUR335H Photogrammetry I (Formerly part of SUR220Y) 26L, 39P Photogrammetric optics, the metric camera, stereoscopy and parallax. Geometry of the vertical photograph and overlapping vertical pairs. Introduction to stereomodel orientation and steroplotting instrumentation. *Prerequisite*: SUR210H, 230Y.

SUR336H Photogrammetry II (Formerly part of SUR220Y)
Stereomodel orientation and stereoplotting instrumentation. Camera calibration.
Measurement and reduction of image coordinates. Interior and exterior orientation of the metric photograph; the projective model and collinearity equations. Analytical procedures. Applications of photogrammetry to map compilation. Prerequisite: SUR335H.

Recommended preparation: CSC139H/149H.

SUR340H Land Planning: Regional Studies

Principles and practice of urban and rural planning and major development works. Land use and other studies needed for comprehensive planning and preparatory to site planning and development.

SUR346H Drainage Law and Engineering
Legal and engineering aspects of land drainage. Particular emphasis on the Drainage Act of
Ontario. Prerequisite: SUR230Y, 241H/260H. Recommended preparation: SUR250H.

SUR350H Land Law and Registration 39L Real property law; land survey systems; title and deed registration systems. *Prerequisite*: SUR250H. SUR351H Boundary Law (Formerly SUR360H)
Boundaries; land parcel descriptions; principles of evidence. *Prerequiste*; SUR350H.

SUR361H Mapping and Charting

26L, 26P

Map content. Charts. Cartographic mappings: equidistant, equal-area, conformal, azimuthal. Classification of mappings according to projection surfaces and projection centres.

Map distortions. Selection of appropriate mapping for specific tasks. Map and chart production processes. National mapping systems. *Prerequisite:* SUR230Y, CSC139H/149H, MAT235/214H and 233H.

SUR362H Data Management and Representation (Formerly SUR320H) 26L, 26P Cartographic, photographic, digital and other forms of data representation. Data transfer, storage and retrieval. Data bases and data banks. Automated and interactive systems. Prerequisite: CSC139H/149H, SUR220Y/335H.

SUR391H Special Topics in Survey Science
Studies of selected topics in Survey Science not covered in the regular courses. *Prerequisite:* Permission of instructor.

SUR392H Special Topics in Survey Science
Studies of selected topics in Survey Science not covered in the regular courses. *Prerequisite:* Permission of instructor.

SUR405H Field Survey Projects
An intensive 144 hours session in the field covering various aspects of survey project design, data acquisition, data reduction and layout. *Prerequisite:* SUR230Y, 303Y/321H and 322H, 312H.

SUR426H Geodetic Astronomy II 26L, 39P
Application of the theory developed in SUR325H for a detailed study of several field methods for obtaining astronomic azimuth and position. Actual field observations are performed, computed and analysed. *Prerequisite:* SUR305H/325H.

SUR431H Phototriangulation
Photogrammetric triangulation as a viable method for the extension of survey control.
Triangulation by analog and analytical methods. Photo control and targetting.
Independent model triangulation. Strip and block adjustment. Accuracy of photogrammetric triangulation. Exclusion: SUR410H. Prerequisite: SUR220Y/335H and 336H, 240H/311H.

SUR440H Land Planning: Site Development 26L, 13P Development of land within the concept of the Official Plan. Subdivisions, condominiums and general site development and approval procedures. *Prerequisite*: SUR241H/260H.

SUR450H Advanced Survey Law
Advanced studies in Canadian survey laws; legal provisions for surveys and records; land information systems and cadastre; special research and discussion topics. *Prerequisite*: SUR351H/360H.

SUR455H Survey Law Seminar
Research in some aspect of law related to surveying; a topic of individual selection for study under supervision, oral presentation before the class and submission of a professional paper. *Prerequisite:* SUR250H.

SUR458H Professional Affairs (Formerly SUR430H)
Perspective on the professions: professional charter by statute; professional ethics, responsibility and liability. Fundamentals of business management; contract law; negligence law. Court procedure and expert witness. Prerequisite: SUR250H and fourth year standing.

SUR471H Hydrographic Surveying I

26L, 39P The fundamentals of hydrographic methods and techniques with particular emphasis on visual and radio positioning including satellite navigation and acoustic position in the marine environment. Prerequisite: MAT235Y/214H and 233H, SUR322H.

SUR472H

Hydrographic Surveying II 26L, 39P Fundamentals of acoustics as related to hydrographic depth measurements. Vertical datums, tidal theory, water transport and basic physical oceanography as related to the field of hydrography. Prerequisite: SUR471H.

SUR495H

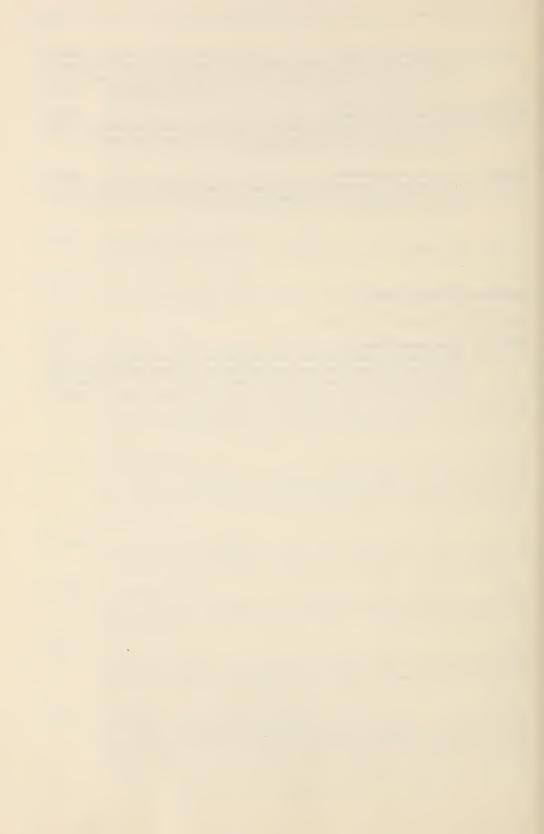
Survey Project and Seminar 39P, 13S Participation in a comprehensive survey project under supervision of staff, including oral presentation of project material before the class and preparation of a final written report. Prerequisite: SUR405H.

## **Woodsworth College Course**

Faculty Advisor: Professor R.W. Van Fossen

WDW103Y Organizational Theory

52L An introduction to the development of managerial and organizational theory and practice. Materials will be drawn from a variety of disciplines including Psychology and Sociology, dealing with bureaucracy and behaviour in large scale organizations. Not recommended for students in the Commerce and Finance programme. Exclusion: COM441H, 442H.



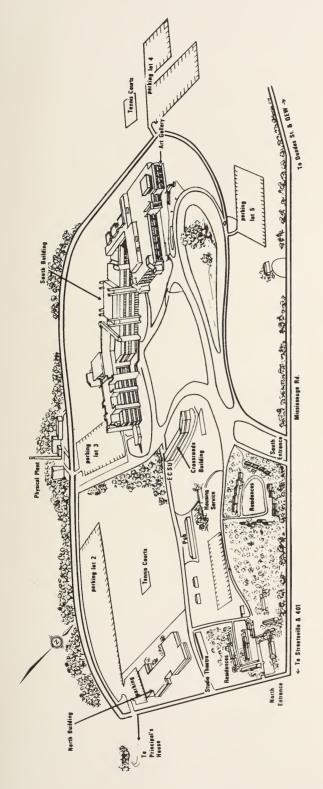
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